

C 12 u 2 m  
1888/89

# ANNOUNCEMENT

OF THE

TWENTY-SIXTH ANNUAL COURSE OF LECTURES

OF THE

# MEDICAL DEPARTMENT

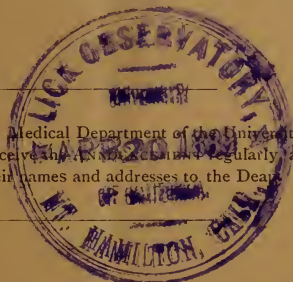
UNIVERSITY OF CALIFORNIA.

WITH

CATALOGUE OF STUDENTS AND GRADUATES.

1889.

Alumni of the Medical Department of the University,  
and others desiring to receive the Catalogue regularly, are requested  
to send their names and addresses to the Deans.



SAN FRANCISCO:

A. J. LEARY, PRINTER AND PUBLISHER.

1889.



ANNOUNCEMENT

OF THE

TWENTY-SIXTH ANNUAL COURSE OF LECTURES

OF THE

THE LIBRARY OF THE  
FEB 26 1931  
UNIVERSITY OF ILLINOIS.

# MEDICAL DEPARTMENT

UNIVERSITY OF CALIFORNIA.

WITH

CATALOGUE OF STUDENTS AND GRADUATES.

1889.

---

Alumni of the Medical Department of the University,  
and others desiring to receive the ANNOUNCEMENT regularly, are requested  
to send their names and addresses to the Dean.

---

SAN FRANCISCO:  
A. J. LEARY, PRINTER AND PUBLISHER,  
1889.

# UNIVERSITY OF CALIFORNIA.

## BOARD OF REGENTS.

### EX OFFICIO REGENTS.

HIS EXCELLENCY R. W. WATERMAN,	- - -	SACRAMENTO
<i>Governor, ex officio President of the Board.</i>		
HIS HONOR S. M. WHITE,	- - -	LOS ANGELES.
<i>Lieutenant-Governor.</i>		
HON. W. H. JORDAN,	- - -	OAKLAND.
<i>Speaker of the Assembly.</i>		
HON. IRA G. HOITT,	- - -	SACRAMENTO.
<i>State Superintendent of Public Instruction.</i>		
HON. L. U. SHIPPEE,	- - -	STOCKTON.
<i>President of the State Agricultural Society.</i>		
P. B. CORNWALL, Esq.,	- - -	SAN FRANCISCO.
<i>President of the Mechanics' Institute.</i>		
HON. HORACE DAVIS, A.B.,	- - -	BERKELEY.
<i>President of the University.</i>		

### APPOINTED REGENTS.

NAME.	ADDRESS.	TERM EXPIRES.
REV. HORATIO STEBBINS, D.D.,	1609 Larkin St., San Francisco,	- 1894
HON. JOHN S. HAGER, LL. D.,	Palace Hotel, San Francisco,	- 1894
HON. J. WEST MARTIN,	Oakland, - - -	- 1898
HON. JOHN F. SWIFT,	32 O'Farrell St., San Francisco,	- 1888
A. S. HALLIDIE, ESQ.,	329 Market St., San Francisco,	- 1892
HON. WILLIAM T. WALLACE,	799 Van Ness Avenue, San Francisco,	1902
JOHN L. BEARD, A.M.,	Warm Springs, - - -	- 1892
HON. A. L. RHODES,	430 California St., San Francisco,	- 1888
HON. T. G. PHELPS,	Belmont, - - -	- 1896
I. W. HELLMAN, ESQ.,	Los Angeles, - - -	- 1902
GEORGE T. MARYE, JR., LL. B.,	234 Montgomery St., San Francisco,	- 1898
ARTHUR ROGERS, B.S. Ph.B.,	309 Montgomery St., San Francisco,	- 1890
GEORGE J. AINSWORTH, Ph.B.,	North Temescal, - - -	- 1900
D. M. DELMAS, A.M.,	327 Pine St., San Francisco.	- 1900
HON. ALBERT MILLER,	S. F. Savings Union, San Francisco,	- 1890
COLUMBUS BARTLETT, ESQ.,	12 Montgomery St., San Francisco,	- 1896
CHAS. FREDERICK CROCKER, ESQ.,	4th and Townsend Sts., San Francisco,	1904
JAS. FRANKLYN HOUGHTON, ESQ.,	216 Sansome St., San Francisco,	- 1904

J. H. C. BONTE, D.D., Secretary, Berkeley.

Regular meetings of the Board of Regents are held six times a year, viz., on the second Tuesday of September, November, January, March and May, and on the Tuesday preceding the last Wednesday in June.

# UNIVERSITY OF CALIFORNIA.

---

## MEDICAL DEPARTMENT.

---

### FACULTY.

- HORACE DAVIS, A.B., President of the University.  
G. A. SHURTLEFF, M.D., Emeritus Professor of Mental Diseases and Medical Jurisprudence.  
M. W. FISH, M.D., Emeritus Professor of Physiology and Microscopy.  
R. BEVERLY COLE, A.M., M.D., M.R.C.S., Eng. Professor of Obstetrics and Gynecology.  
W. F. McNUTT, M.D., M.R.C.P., Edin., etc., Professor of Principles and Practice of Medicine.  
ROBERT A. McLEAN, M.D., Professor of Clinical and Operative Surgery, Dean.  
W. E. TAYLOR, M.D., Professor of Principles and Practice of Surgery.  
A. L. LENGFELD, M.D., Professor of Materia Medica and Medical Chemistry.  
WM. B. LEWITT, M.D., Professor of Anatomy.  
BENJ. R. SWAN, M.D., Professor of Diseases of Children.  
WM. H. MAYS, M.D., Professor of Mental Diseases and Medical Jurisprudence.  
WASHINGTON AYER, M.D., Professor of Hygiene.  
GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology and Otology.  
WM. WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.  
ARNOLD A. D'ANCONA, A.B., M.D., Professor of Physiology.  
DOUGLAS W. MONTGOMERY, M.D., Professor of Pathology and Microscopy.  
———, Professor of Therapeutics.
- 

JOHN M. WILLIAMSON, M.D., Demonstrator of Anatomy.

---

- WINSLOW ANDERSON, M.D., Assistant to the Chair of Materia Medica and Medical Chemistry.  
JULES SIMON, M.D., Assistant to the Chair of Mental Diseases and Medical Jurisprudence.  
JOHN H. BARBAT, Ph.G., M.D., Assistant Demonstrator of Anatomy.
- 

### College Dispensary Staff.

JULES SIMON, M.D. H. W. DODGE, M.D.  
D. W. MONTGOMERY, M.D.

---

ROBERT A. McLEAN, M.D., Dean,  
603 Merchant Street, corner of Montgomery,  
San Francisco Cal.

## CALENDAR.

---

THE PRELIMINARY TERM of 1889, will open on Monday, March 4th, and close on Saturday, May 11th.

THE REGULAR TERM will open on Monday, June 3d, and close on Thursday, October 31st.

THE MATRICULATION EXAMINATIONS will be held at the College building on March 2d and June 1st.

THE DIDACTIC LECTURES are delivered at the College building, (Toland Hall), Stockton street, below Chestnut, San Francisco.

THE CLINICAL LECTURES are delivered at the City and County Hospital, Twenty-second street and Potrero avenue.

THE ANNUAL COMMENCEMENT for conferring the Degree of Doctor of Medicine will be held early in November, in San Francisco.

## TWENTY-SIXTH ANNUAL COURSE OF INSTRUCTION.

---

### SESSION OF 1889.

The Medical Department of the University of California was organized in 1872, as an integral part of the State's Educational center. It was among the first to adopt the higher standard of Medical Education ; having, as early as 1875, instituted a three years' course and graded studies, and in 1885, and examination for admission to the College.

The changes introduced into the curriculum of this school and now in force, may be summarized as follows :

1. *Increase of the time of study to three years.* Three regular courses of lectures of five months each, attended through three several years, are required before the student can present himself for graduation. Students are also required to attend the clinics regularly throughout the term, and senior students to attend the preliminary term.

2. *Yearly examinations.* At the beginning of each session, examinations are held to determine the progress of the student during the year past, his advancement depending on the result of such examinations.

3. *Graded studies.* By this arrangement the student is thoroughly drilled in the elementary subjects before proceeding higher. He is, however, expected to attend all the lectures, giving most of his hours of study to the subjects allotted to his own year.

The following are the subjects apportioned to each year's studies:

*First Year.* Anatomy, Physiology, Histology and Microscopy, Materia Medica and Medical Chemistry, Pharmacy, Dissections, Dispensary and Laboratory Work. Final examinations at the end of the first year in Pharmacy and Laboratory Work.

*Second Year.* Anatomy, Physiology, Materia Medica and Medical Chemistry, Principles and Practice of Medicine, Principles and Practice of Surgery, Therapeutics, Histology and Pathology, Obstetrics, Clinical Medicine, Clinical Surgery, Hygiene, Dissections, Dispensary, Clinics. Final examinations at the end of the second year in Physiology, Materia Medica and Medical Chemistry, Histology and Hygiene.

*Third Year.* Principles and Practice of Medicine, Principles and Practice of Surgery, Obstetrics and Gynecology, Therapeutics, Clinical Medicine and Pathology, Clinical Surgery, Mental Diseases and Medical Jurisprudence, Diseases of Children, Ophthalmology and Otology, Anatomy, Special Clinics.

Graduates of this College, and those holding certificates of attendance upon lectures, are credited for the full time of their medical studies by the Royal College of Surgeons of England, Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow.



## LOCATION.

While the several other Colleges of the State University are clustered at Berkeley, its Medical Department is, for obvious reasons, situated in San Francisco. The Medical College building, known as "Toland Hall," in honor of its illustrious founder, is one of the most complete and stately in the country. It is located near North Beach, overlooking the Golden Gate, a locality favoring the health and industrious habits of the students.

The Lecture Hall of the College is capable of seating five hundred persons; the Clinical Amphitheatre is about equally as capacious; the Museum contains an extensive collection of specimens and preparations; the Dissecting room is fitted up with all the modern improvements; the Laboratory is replete with all chemicals and apparatus necessary for practical teaching. A suite of apartments in the building is set apart for the Dispensary Clinics.

The College stands near the terminus of the Omnibus line of street cars, and the terminus of the North Beach and Mission line, is distant one block further.

---

## THE COLLEGIATE YEAR.

Contrary to the custom of Eastern Medical Colleges, the lectures in this school are delivered during the Spring and Summer months. The peculiar climate of San Francisco renders Spring and Summer far the preferable season for prosecuting the medical studies; hence the sessions are held from March to November. During this period, and indeed largely throughout the other months of the year also, cool trade-winds blow across the city daily, moderating the temperature, and particularly favoring the study of practical anatomy and necropsy. The student in this city enjoys rare natural advantages for the healthful pursuit of his labors, such a contingency at his detention from lectures or clinics by stress of weather being absolutely unknown.

The College year is divided into two terms: The Preliminary or Spring Term, and the Regular or Summer Term.

THE PRELIMINARY TERM commences March 4th and ends May 11th. During this term, subjects are dwelt upon that do not receive the full meed of attention during the Regular Term. Clinics proceed at the Hospital and College as during the Regular Term. The Dissecting Room is open for practical work. All students are expected to attend this course, although such attendance is not compulsory, except to members of the senior class.

THE REGULAR TERM begins on Monday, June 3d, and terminates on Thursday, October 31st. During this term, all the branches of medicine and surgery are taught, didactically and clinically. Regular clinics are held three days each week at City and County Hospital, where the Professors of the clinical chairs have charge of wards, and possess every advantage for the instruction of students; clinics are also held at the College Dispensary. Lectures are given daily by the Professors and evening recitations are held three times a week.



## METHODS OF INSTRUCTION.

---

The course of studies pursued at this school comprises Clinical, Didactic, and Laboratory teaching. Special prominence is given to the former, although it is endeavored that the three methods shall be so blended as to form one harmonious whole.

---

### CLINICAL TEACHING.

*In Clinical Teaching*, the plan pursued by the several Clinical Professors, has for its aim the actual confronting of the student with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis.

The facilities for clinical studies open to the students of the University have been largely increased. Full access is given to the City and County Hospital, a complete and modern structure containing five hundred beds, and presenting for observation, perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, giving them unusual advantages for developing clinical material. The Professor of Clinical Surgery has charge of three surgical wards (thirty-two beds in each), the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology, and the Professor of Ophthalmology, one ward each. Autopsies are conducted three times a week in the Mortuary by the Pathologist. A large operating theatre has been erected, where the major and minor operations of surgery are performed in view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second street with Potrero avenue, and is accessible from the North Beach and Mission cars, the Omnibus and the Mission street lines.

### HOSPITAL CLINICS.

**Clinical Surgery.**—Professor McLean delivers clinical lectures on Practical and Operative Surgery, at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout the session. Especial attention is given in a ward devoted to the purpose, to the conduct of disorders of the genito urinary organs and venereal diseases. A course on Minor Surgery is also given. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, etc.

**Clinical Medicine.**—Professor W. W. Kerr will deliver a course of lectures on Clinical Medicine at the same Hospital each Tuesday, Thursday and Saturday. The course of study will consist in the demonstration of cases illustrating the different phases and peculiarities which disease assumes, the examination of patients at the bedside by the student under the guidance of the Professor, together with the instruction in all these details which qualify the student to discharge his duty agreeably and efficiently in the sick room.

**Gynecology and Practical Midwifery.**—Professor R. Beverly Cole holds a Thursday Clinic, including a course of instruction in Operative Gynecology, the use of instruments, appliances, etc. He will also devote a portion of his lectures to Clinical Midwifery, taking as illustration, such cases of interest as may occur in the Lying-in-ward from time to time. The senior students will each in rotation, have opportunities for the study of Practical Obstetrics at the bedside.

**Ophthalmology and Otology.**—Professor Powers will deliver one didactic lecture a week during the course, covering the subjects of the Eye, and Ear, Larynx, Pharynx, Naso-Pharynx and Nasal Cavities. These lectures will be illustrated by models, charts and blackboard drawings. He will also conduct two clinics a week at the City and County Hospital, where, in addition to operative and severe cases, he has a large out-patient clinic, including many children, with many illustrations of cases as they appear in daily practice. At these clinics the third year students are required in turn, to keep the record of the cases, with a view to cultivating a habit of case writing. Once in two weeks Professor Powers has an evening "Quiz" for the third year students, which is conducted in turn by the students themselves, under the personal supervision of the Professor.

#### COLLEGE DISPENSARY CLINICS.

The Faculty has organized a Free Dispensary Clinic, which is held at the College building on Tuesdays and Thursdays at 4 P. M.

---

### DIDACTIC TEACHING.

---

A brief outline of the course pursued by the several departments will be found in the following summary :

**Surgery.**—Professor Taylor delivers two lectures each week on the art and science of surgery. The more recent views on the management of surgical conditions, and the appliances devised for their relief, are particularly dwelt upon, and illustrated with drawings and models when necessary. The course will include a series of lectures upon operative surgery, with demonstrations on the cadaver. The students will be drilled in the manipulation of instruments used in the various operations.

**Practice of Medicine.**—Professor W. F. McNutt presents in his lectures, the principles and practice of medicine in its modern aspects. He gives a description of the different diseases, their etiology, pathology, symptoms, diagnosis, prognosis, and treatment. The various pathological changes are demonstrated by means of plates, preparations, and recent specimens of diseased parts.

**Obstetrics.**—The science and art of obstetrics are taught by Professor R. Beverly Cole. His lectures are fully illustrated by the use of colored plates and drawings, prepared specimens and the manikin. The principal obstetric operations are performed on the cadaver in presence of the class.

**Physiology.**—The lectures in this department by Professor D'Ancona embrace a consideration of both general and special physiology, including all that has been developed up to the present time, and are illustrated by a complete series of colored drawings, prepared exclusively for these lectures. Besides which, the large collection of preparations and drawings of the Scientific Department at Berkeley are at the command of the Professor. Vivisections are practiced when necessary, and the use of the microscope fully taught.

The course embraces the lectures of two years, one year being devoted to the physiology of the nervous system and reproduction, the other to nutrition, respiration, circulation, etc.

**Therapeutics (Medical and Surgical.)**—The lectures in this department, by Professor Kerr, will explain the physiological actions and therapeutic indications of all agents, medical and surgical, used for the cure, alleviation or prevention of diseases. The action of drugs will be shown by practical demonstrations upon living animals.

**Materia Medica and Medical Chemistry.**—Professor A. L. Lengfeld, in his course, will deliver two lectures each week, devoting particular attention to that part of Materia Medica and Chemistry which pertains more particularly to practical medicine and pharmacy, and using for this purpose, all necessary philosophical and chemical apparatus. Special attention will be given to Prescription Writing, Urin Analysis, and Toxicology, and to the nature, origin, physical and chemical properties of the various remedies officinal in the United States Pharmacopœia.

Dr. Winslow Anderson, assistant to the Chair of Materia Medica and Medical Chemistry, will conduct the Laboratory investigations, including qualitative analysis and recitations at least three hours each week during the term.

**Anatomy.**—Professor Lewitt's lectures on Anatomy are illustrated by the cadaver, and by both wet and dry preparations, models, manikin and drawings, and include a course on general, special and topographical anatomy. The Dissecting Room is spacious, well ventilated, lighted from above, and provided with every convenience. It is open throughout the year, under the superintendence of the Professor and Demonstrator of Anatomy. A supply of material is always procurable at small cost. When dissections are conducted in a diligent manner, the student is furnished with certificates stating the amount and part dissected.

**Gynecology.**—This subject is taught didactically and clinically by Professor Cole. The use of gynecological instruments is carefully shown, and the several procedures explained by means of colored charts, diagrams and manikins.

**Hygiene.**—The importance now attaching to the science of Hygiene, induced the Regents and Faculty to give it a place in the curriculum of the school. The instruction in this department will be in charge of Professor Washington Ayer.

**Diseases of Children.**—Professor Swan will devote one hour each week to this subject, illustrating his lectures by notes drawn from an unusually large experience in the management of diseases peculiar to children.

**Mental Diseases.**—The lectures by Professor Mays, late Superintendent of the State Asylum for the Insane at Stockton, on this subject, aim to im-

part a practical acquaintance with the forms and manifestations of insanity. The causation and prophylaxis of mind disorders receive special consideration. A supplementary series of lectures is given by the Professor, on the *Medical Jurisprudence* of Insanity.

---

#### HOSPITAL INTERNES.

The position of Interne in the City and County Hospital is open each December to three members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year, and secure opportunities for accumulating an invaluable experience in every field of practical medicine and surgery.

---

### THE HIGHER STANDARD OF EDUCATION.

#### REQUIREMENTS FOR ADMISSION.

In addition to the curriculum already instituted, namely, a three year's graded course of study, with yearly examinations ;

A matriculation examination is required in the following subjects:

1. ENGLISH.—A written composition not to exceed one page foolscap in length, upon some subject connected with American history or biography.
2. ARITHMETIC.
3. GEOGRAPHY.
4. PHYSICS.

No matriculation examination will be required of candidates who have received a Collegiate Degree, or who have passed the examination for admission to, or are graduates of, the College of Letters or of Science of the University of California, or who have passed the matriculation examination of any recognized college, or who present a certificate covering the required subjects from a recognized Normal or High School.

Students who have attended one full course in any recognized Medical College, will, upon satisfactory examination in the curriculum provided for the first year, be admitted as students of the *second course* in the University of California.

Students who have attended two courses in any recognized Medical College, will be admitted as students of the *third course* in this institution, on passing a satisfactory examination in the curriculum provided for the second year.

Graduates of other regular Medical Colleges in good standing, will be admitted as students of the *third course* in this institution without any examination.

Graduates of Pharmaceutical and Dental Colleges in good standing, are admitted to the second year without examination.

Theological and Law Students will be admitted to special lectures without examination.

The matriculation examinations will be conducted at the College building on March 2d, and June 1st.

### REQUIREMENTS FOR GRADUATION.

- I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years and be of good moral character.
- II. He must have studied medicine three full years, and must have attended three regular courses of lectures, the last of which must have been that of the University of California.
- III. He must have passed the required examinations, written and oral.
- IV. He must have pursued the study of practical anatomy during at least two sessions, and must present certificates of having dissected every part of the cadaver.
- V. He must have paid in full the College fees, including the graduation fee.

---

### BOARDING.

The expense of living in San Francisco is not great. Good board, with room rent may now be procured at the low rate of five dollars per week, at a convenient distance from the College building. Students from a distance may learn the address of these boarding houses, and other information, by calling on the Dean of the Faculty, Dr. R. A. McLean, 603 Merchant street, corner of Montgomery.

---

### FEES.

Matriculation Fee (paid but once).....	\$ 5
Demonstrator's Ticket.....	10
Fee for the First Course of Lectures.....	130
Fee for the Second Course of Lectures.....	130
No Fee is required for the Third Course of Lectures.	
Graduating Fee.....	40

Students who have already attended two full courses of lectures in other regular schools, and graduates of other regular schools who will be of less than three years' standing at the end of a given session, are admitted to the full course of lectures of such session (not including practical anatomy) on the payment of the matriculation fee and sixty-five dollars.

Graduates of other regular schools who will be of three years' standing at the end of a given session are admitted to all the didactic and clinical lectures of such session on payment of the matriculation fee only.

---

### TEXT-BOOKS AND WORKS OF REFERENCE.

- ANATOMY—Gray, Holden, Weisse, Quain, Ford's Questions.  
 PHYSIOLOGY—Flint, Foster.  
 CHEMISTRY—Lloyd's Chemistry of Medicines, Bartley, Witthaus.  
 HISTOLOGY—Rindfliesch, Stricker.  
 SURGERY—Ashurst, Bryant, Agnew, Toland, Erichsen.  
 PRACTICE OF MEDICINE—Roberts, Reynolds, Neimeyer.  
 CLINICAL MEDICINE—Da Costa, Hartshorne, Flint.  
 MIDWIFERY—Leishman, Playfair, Bedford, Lusk.  
 GYNECOLOGY—Thomas, Emmet, Sims.  
 MATERIA MEDICA—United States Pharmacopœia, Dispensatories (U. S. and National).



THERAPEUTICS—Wood, Bartholow, Ringer.  
OPHTHALMOLOGY—Williams, Wells.  
OTOLOGY—Roosa, Burnett.  
RHINOSCOPY—Robinson, McKenzie.  
PEDIATRICS—Lewis Smith, Meigs and Pepper, Eustace Smith.  
DERMATOLOGY—Fox, Neumann, Duhring.  
MENTAL DISEASES AND MEDICAL JURISPRUDENCE—Maudsley, Bucknell  
and Tuke, Reese, Taylor.  
PATHOLOGY—Wagner, Delafield, Coates.  
LARYNGOLOGY—McKenzie, Cohen.  
PRESCRIPTION WRITING—Mann, Gerrish.  
URINE ANALYSIS—Legge, Hoffmann and Ultzmann.

---

GRADUATES—1888.

Alexander, Monrove E. . . . . Albany, Oregon  
Barbat, John H., Ph.G. . . . . San Francisco, California  
Cox, Rosamond L. . . . . New York, New York  
Dennis, Nathan P. . . . . San Francisco, California  
Dunn, James P. H., S.B. . . . . Berkeley, California  
Estes, Melvin B. . . . . San Francisco, California  
Frick, Euclid B. . . . . Philadelphia, Pennsylvania  
Happersberger, Albert K., A.B. . . . . San Francisco, California  
Kelly, John L. . . . . Lewiston, Idaho Territory  
Noble, John A. . . . . St. Johns, Canada  
White, James T. . . . . Oakland, California

---

MATRICULANTS—1888.

Atwater, Charlotte. . . . . Winchester, Massachusetts  
Auzal, E. W., M.D. (U. S. N.). . . . . New Orleans, Louisiana  
Bond, Frederick T., Ph.G. . . . . Vallejo, California  
Bunker, Robert E. . . . . Bloomington Ferry, Minnesota  
Burns, George A. . . . . Lowell, Massachusetts  
Callegaris, Joseph, Ph.G. . . . . San Francisco, California  
Campbell, Palmerston C. . . . . Suisun, California  
Casterline, Edwin D. . . . . Oil City, Pennsylvania  
Comyns, James E. . . . . San Francisco, California  
Dickinson, Frank W. . . . . Rocky Hill, Connecticut  
Donohue, Thomas. . . . . Parsons Town, Ireland  
Felt, Rae. . . . . Eureka, California  
Foreman, Francesca I. . . . . San Francisco, California  
Garcia, Frank. . . . . San Leandro, California  
Gibbon, James E. . . . . San Francisco, California  
Gleaves, Archibald D., D.D.S. . . . . Anderson, California  
Gleaves, Christopher C. . . . . Anderson, California  
Haraszthy, Carlos. . . . . San Francisco, California  
Haskin, William H. . . . . San Francisco, California

Hassain, Syed Abul.....	Calcutta, Bengal
Hawkins, William J.....	San Francisco, California
Holmes, Edward R.....	Walla Walla, Washington Territory
Hunkin, Samuel J.....	England
Iredale, Charles W.....	San Francisco, California
Johnson, Rena.....	Richmond, Virginia
Jones, Ottowell W.....	San Francisco, California
Kawakami, Masayasu .....	Japan
Kirby, William T. G.....	San Francisco, California
Kugeler, Henry B. A.....	San Francisco, California
Larkey, Frank X.....	San Francisco, California
Looney, Mathew, S.A., D.Sc.Ph.D.....	San Francisco, California
Macinnis, Martin B.....	Prince Edward Island, Canada
Mann, Charles S.....	Newport, Oregon
Mather, Squire R.....	Kelseyville, California
Martinez, Juan M.....	Guatemala, Central America
Marx, Frances R.....	San Francisco, California
Mayer, Oscar J., Ph.G.....	San Francisco, California
Meyer, Albert G.....	San Francisco, California
Minor, George W. Ph.G.....	San Francisco, California
Mish, Soloman C.....	San Francisco, California
Mohun, Charles C.....	Sacramento, California
Moore, Frank E.....	Boston, Massachusetts
Olsen, Karie-Colditz.....	Christiania, Norway
O'Brien, Aloysius P.....	Port Townsend, Washington Territory
Olliver, Joseph A.....	San Francisco, California
O'Donnell, George W.....	San Francisco, California
Payne, Redmund W.....	Novato, California
Sato, Yujiro.....	Japan
Schmidt, Theodor.....	Alameda, California
Smith, Henry P.....	Cloverdale, California
Spring, Charlotte B.....	San Francisco, California
Shurtleff, Benjamin E.....	Napa, California
Surryhne, Benjamin F.....	Oakland, California
Takashima, Youkichi.....	Japan
Tiedemann, Carl W., A.B.....	New York, New York
Tormey, James P.....	Pinole, California
Tuggle, Samuel P.....	Memphis, Tennessee
Tyrrell, Gerrard G.....	Sacramento, California
Uchida, F.....	Japan
Wright, Henry E.....	Belmont, Wisconsin
Zeyn, Gustav C.....	Anaheim, California
Zinkeisen, Oscar T., A.B.....	Cross Plains, Wisconsin

# SUMMARY.

Graduates, 1888.....	11
Undergraduates, 1888.....	62
Total.....	73



COMPLETE LIST OF GRADUATES.

Addington, D. M.	Michigan Bar, California	1879
Allen, Edward O.	New York, N. Y.	1875
Alexander, Monrove E.	Albany, Oregon	1888
Anderson, J. A.	Kansas	1873
Anderson, Winslow	San Francisco, California	1884
Armistead, Howell V.	Modesto, California	1885
Baldwin, Robert O.	Danville, California	1885
Barbat, John H. Ph.G.	San Francisco, California	1888
Barber, Edward T.	Eel River, California	1866
Bates, Charles B.	Oroville, California	1868
Bates, Walter E.	Oakland, California	1881
Beardsley, E. M.	San Francisco, California	1881
Beaumeister, B. H.	San Francisco, California	1882
Beede, William M. S.	Bakersfield, California	1884
Benedict, C. W.	Virginia	1875
Bettleheim, A. F.	San Francisco, California	1880
Biggs, F. P.	Valparaiso	1874
Blake, Chas. M.	San Francisco, California	1876
Blake, James W.	San Francisco, California	1874
Bordé, Henry J.	San Jose, California	1883
Bradbury, Geo. F.	San Francisco, California	1878
Brannan, J. J.	Berkeley, California	1876
Brierly, Conant B.	San Francisco, California	1876
Briggs, M. W.	Santa Barbara, California	1870
Bromly, R. I.	Oakland, California	1878
Brown, Ernest S.	San Francisco, California	1886
Brown, Geo. J.	Biggs Station, California	1876
Bruns, W. C.	San Francisco, California	1878
Buckley, Vincent P.	San Francisco, California	1884
Burchard, L. S.	Oakland, California	1882
Cairns, John C.	San Francisco, California	1876
Calbreath, John F.	Weston, Virginia	1875
Caldwell, H. H.	San Jose, California	1880
Caldwell, Robert	San Jose, California	1869
Callaghan, D. T.	Grand Gulf, Mississippi	1873
Cameron, James S.	San Francisco, California	1868
Chaigneau, V. A.	San Francisco, California	1876
Churchill, Leonard	San Francisco, California	1871
Chalmers, Wm. P.	Watsonville, California	1886
Clark, J. J.	San Francisco, California	1869
Clark, Wm. D.	San Francisco, California	1884
Clinton, C. A.	San Francisco, California	1881
Cluness, Wm. R., Jr.	Sacramento, California	1887
Cochran, W. A.	San Francisco, California	1869
Conlan, Wm. E.	San Francisco, California	1886
Collins, Addison C.	Davisville, California	1885
Connolly, John J.	San Francisco, California	1878
Connolly, Thos. E.	Vallejo, California	1884

Cook, Frank S.....	Tucson, Arizona.....	1887
Corbett, S. J.....	San Francisco, California.....	1868
Cox, Rosamond L.....	New York, New York.....	1888
Cox, Thos. H.....	San Francisco, California.....	1873
Curran, Mary K.....	San Francisco, California.....	1878
Damour, Ferdinand.....	San Francisco, California.....	1864
D'Ancona, Arnold A., A.B.....	San Francisco, California.....	1884
Davie, J. C., Jr.....	Victoria, Vancouver's Island.....	1864
Davidson, Joseph R.....	Selem, Oregon.....	1875
Dawson, Alson.....	New York, New York.....	1875
Day, John G.....	San Francisco, California.....	1884
Dean, Andrew J.....	San Francisco, California.....	1881
Delmont, Francois.....	San Buenaventura, California.....	1874
Dennis, Nathan P.....	San Francisco, California.....	1888
Depuy, Anson A.....	San Francisco, California.....	1881
Dodge, Henry W.....	San Francisco, California.....	1884
Downs, George W.....	Vallejo, California.....	1879
Drinkhouse, E. J. C.....	San Francisco, California.....	1865
Dubois, A. L.....	Lincoln, California.....	1864
Duncan, S. C.....	Vallejo, California.....	1877
Dunn, James P. H., S.B.....	Berkeley, California.....	1888
Enright, Chas. M., A.B.....	Santa Clara, California.....	1884
Estes, Melvin B.....	San Francisco, California.....	1888
Evans, C. W.....	Modesto, California.....	1881
Fenn, C. N.....	San Francisco, California.....	1865
Fine, Andrew.....	San Jose, California.....	1866
Foot, Gilbert.....	Lakeford, California.....	1879
Fottrell, Michael J.....	San Francisco, California.....	1887
Foulkes, J. F., Jr.....	Oakland, California.....	1880
Frick, Euclid B.....	Philadelphia, Pennsylvania.....	1888
Frost, Joseph.....	Vallejo, California.....	1877
Gale, Herbert A.....	Sacramento, California.....	1879
Gallwey, John.....	San Francisco, California.....	1885
Gates, Frank H.....	San Francisco, California.....	1884
Gilham, G. W.....	Oakland, Oregon.....	1881
Glaze, George I.....	Saratoga, Kansas.....	1887
Grattan, E. L.....	San Francisco, California.....	1881
Gros, Edward.....	San Francisco, California.....	1865
Guilemard, A. J.....	San Francisco, California.....	1878
Hackett, John.....	San Francisco, California.....	1867
Haile, C. S.....	Alameda, California.....	1869
Hampton, James E.....	San Francisco, California.....	1871
Handy, J. C.....	San Francisco, California.....	1864
Hansen, Thomas C.....	San Francisco, California.....	1867
Happersberger, Albert K., A.B.....	San Francisco, California.....	1888
Harmon, R.....	Oakland, Oregon.....	1879
Harris, Thomas W.....	Kussellville, Indiana.....	1875
Heavitt, Granville.....	San Francisco, California.....	1866
Heinimann, J. M.....	San Francisco, California.....	1877

Hicks, Young E.....	Merced, California.....	1874
Hodgdon, W. H. A.....	San Francisco, California.....	1876
Hook, Walter E.....	Walnut Creek, California.....	1876
Hopkins, T. P.....	San Francisco, California.....	1880
Howard, Katherine I.....	San Francisco, California.....	1882
Howard, Wm. B.....	Modesto, California.....	1887
Howell, H. H.....	Knight's Ferry, California.....	1879
Hughes, Jerome A.....	San Francisco, California.....	1883
Hughes, L. J.....	San Francisco, California.....	1879
Johnstone, A.....	San Francisco, California.....	1879
Joseph, Simon E.....	East Portland, Oregon.....	1877
Keane, George B.....	San Francisco, California.....	1872
Kelly, John L.....	Lewiston, Idaho Territory.....	1888
Kingsley, Thomas H.....	San Francisco, California.....	1886
Kirchhoffer, Frederick.....	San Francisco, California.....	1887
Kirkpatrick, C. A.....	Redwood City, California.....	1871
Kirkwood, J. W.....	Salem, Oregon.....	1876
Kobayashi, Sankio.....	Japan.....	1887
Kosbue, A. Emil.....	Hamburg, Germany.....	1875
Kurtz, Joseph.....	Los Angeles, California.....	1875
Laidlaw, Horace.....	Oakland, California.....	1880
Le Fevre, J. P.....	Plumas County, California.....	1881
Lewitt, F. A.....	San Francisco, California.....	1878
Lindenberger, W. H.....	Bartlett Springs, California.....	1876
Lingo, Marin B.....	Salem, Oregon.....	1866
Lonigo, Emile V.....	San Francisco, California.....	1883
Lord, Franklin F.....	San Francisco, California.....	1880
Lovett, Wm. B.....	Oakland, California.....	1883
Lunborg, Gustaf W.....	San Francisco, California.....	1883
Lustig, Daniel D., Ph.G.....	San Francisco, California.....	1885
Lyford, L. Dexter.....	San Francisco, California.....	1872
Mackenzie, J. H.....	Edinburg, Scotland.....	1870
Martineaut, E. D.....	San Francisco, California.....	1873
Mason, Benjamin F.....	San Francisco, California.....	1875
Matthewson, J. M.....	San Francisco, California.....	1882
Mays, Arthur H.....	Stockton, California.....	1887
Mays, Wm. H.....	San Francisco, California.....	1873
McColl, G. F.....	East Portland, Oregon.....	1877
McCormack, Herbert F., A.B.....	St. Helena, California.....	1876
McCoy, Juan W.....	Bell's Ridge, California.....	1884
McDermott, Wm. P.....	San Francisco, California.....	1874
McDonnald, J. J.....	San Francisco, California.....	1877
McGuire, Lucius.....	San Francisco, California.....	1868
McLaughlin, M. A.....	San Francisco, California.....	1878
McLean, John T.....	Modesto, California.....	1887
McLean, Robert A.....	Modesto, California.....	1874
Mervy, Emile C.....	San Francisco, California.....	1883
Merritt, T. W.....	San Francisco, California.....	1882
Meyers, R. C.....	San Francisco, California.....	1880

Miller, Chas. F.....	San Francisco, California.....	1874
Miller, John A.....	San Francisco, California.....	1875
Minor, John F.....	San Francisco, California.....	1876
Moody, Mary F.....	San Francisco, California.....	1882
Morgan, F. E.....	Sunta Cruz, California.....	1881
Morrill, Augustus L.....	Colima, Mexico..	1887
Mueller, H. E.....	Brooklyn, California.....	1880
Muenter, Henry.....	Stockton, California.....	1882
Newmark, Valentine.....	San Francisco, California.....	1868
Nichols, Theodore A.....	Mission San Jose, California.....	1885
Noble, John A.....	St. Johns, Canada.....	1888
Nottage, George E.....	Stockton, California.....	1874
Nuttall, George H. F.....	San Francisco, California.....	1884
Olds, Wm. H.....	San Francisco, California.....	1881
O'Neill, A. A.....	San Francisco, California.....	1867
O'Neill, J. C.....	Vallejo, California.....	1873
Oster, Chas.....	Oakland, Oregon.....	1878
Park, Theorilda C.....	San Francisco, California.....	1887
Partsch, Herman.....	San Francisco, California.....	1884
Paton, Chas. J.....	San Francisco, California.....	1883
Patterson, T. J.....	Visalia, California.....	1882
Payne, J. R.....	San Francisco, California.....	1882
Perrault, Edward L.....	San Francisco, California.....	1885
Pescia, Joseph.....	San Francisco, California.....	1877
Plant, Benj. A.....	Sacramento, California.....	1886
Plummer, Richard H.....	Yolo, California.....	1866
Pond, Henry M.....	San Francisco, California.....	1880
Pond, W. B.....	San Francisco, California.....	1864
Pope, Horace E.....	San Francisco, California.....	1876
Powell, J. M.....	Mammoth, Oregon.....	1876
Pressley, J. B.....	Santa Rosa, California.....	1882
Prevost, J. Renny.....	San Jose, California.....	1866
Pruett, J. A.....	Pendleton, Oregon.....	1878
Quinlan, Albert P.....	San Francisco, California.....	1876
Reardon, T. B.....	Oroville, California.....	1882
Reardon, Wm. E.....	San Francisco, California.....	1887
Reed, Clarence E.....	Placerville, California.....	1883
Reich, George A.....	San Francisco, California.....	1877
Reynolds, George E.....	San Francisco, California.....	1877
Richardson, J. A.....	Amity, Oregon.....	1866
Riley, J. S.....	Vallejo, California.....	1883
Robertson, John W.....	San Francisco, California.....	1880
Robinson, Luke.....	Petaluma, California.....	1867
Rorke, James.....	San Francisco, California.....	1876
Rucker, H. N.....	Santa Clara, California.....	1870
Rupe, Samuel H.....	Healdsburg, California.....	1866
Sabey, L. A.....	San Francisco, California.....	1880
Sage, H. T.....	San Francisco, California.....	1870
Sawyer, H. C.....	San Francisco, California.....	1881

Schellhous, E. J.....	Huron County, Ohio.....	1875
Schnabel, Martin.....	Newcastle.....	1873
Scholl, Albert L., Ph.G.....	San Francisco, California.....	1884
Scott, Arthur W.....	San Francisco, California.....	1879
Seavey, L. T.....	Port Townsend, W. T.....	1878
Seawell, John L.....	Healdsburg, California.....	1870
Seawell, Thomas H.....	Healdsburg, California.....	1876
Sellon, Anna F.....	San Francisco, California.....	1881
Senter, E. S.....	San Jose, California.....	1882
Shannon, James.....	San Francisco, California.....	1887
Sheets, John H.....	Phoenix, Arizona Territory.....	1881
Shelton, Thos. W.....	Salem Oregon.....	1867
Sherman, Elenora S.....	San Francisco, California.....	1884
Shuey, Sarah I.....	East Oakland, California.....	1878
Sichel, Gust. W.....	San Francisco, California.....	1876
Simon, Jules A.....	Paris, France.....	1875
Soboslay, Julius.....	San Francisco, California.....	1886
Smith, George S.....	San Francisco, California.....	1879
Smith, T. H.....	Eureka, California.....	1876
Smith, Wm. P.....	Salem, Oregon.....	1875
Sparkes, Agnes.....	San Francisco, California.....	1879
Stanton, James.....	San Francisco, California.....	1882
Steely, John.....	Kirbyville, Oregon.....	1867
Stevenson, J. R.....	San Francisco, California.....	1877
Stewart, J. M.....	San Francisco, California.....	1882
Stivers, C. A.....	San Francisco, California.....	1864
Summers, G. M.....	Sonora, California.....	1876
Summers, John F.....	San Francisco, California.....	1878
Sutro, Emma L.....	San Francisco, California.....	1881
Swann, Charles M.....	San Francisco, California.....	1875
Swisher, J. R.....	Danville, Illinois.....	1877
Tartar, A. P.....	Tehama, California.....	1882
Taylor, Edward R.....	San Francisco, California.....	1865
Tevis, Henry L.....	San Francisco, California.....	1887
Toland, Charles A.....	San Francisco, California.....	1869
Turner, J. T.....	Mariposa, California.....	1869
Tuttle, H. P.....	Castroville, California.....	1869
Urban, Kurt.....	San Francisco, California.....	1883
Voigt, W. C.....	San Francisco, California.....	1879
Von Buelo, F.....	San Francisco, California.....	1877
Walz, G.....	San Francisco, California.....	1868
Wanzer, L. M. F.....	San Francisco, California.....	1876
Watanabe, Tey.....	Japan.....	1887
Waters, John W.....	Carson City, Nevada.....	1874
Webber, J. S.....	Sierra County, California.....	1869
Weeks, F. L.....	San Francisco, California.....	1864
Wheaton, S. P.....	Oakland, California.....	1877
Whittell, A. P.....	San Francisco, California.....	1873
Weiss, E. M.....	San Francisco, California.....	1877



Welch, W. P.....	San Francisco, California.....	1864
White, James T.....	Oakland, California.....	1888
Wickman, Wm. J.....	San Francisco, California.....	1883
Widney, J. P.....	Santa Clara, California.....	1867
Wilcox, Wilber J.....	Oakland, California.....	1885
Williams, Robert B.....	San Francisco, California.....	1887
Williamson, John M.....	Vallejo, California.....	1885
Williamson, W. T.....	East Portland, Oregon.....	1877
Wilson, Kemlo R. McD.....	San Francisco, California.....	1886
Winton, Henry N.....	Haywards, California.....	1885
Woods, W. E. Josephine.....	San Francisco, California.....	1885
Wooster, David.....	San Francisco, California.....	1885
Young, Junius D.....	Stockton, California.....	1881
Younger, Alex. J.....	San Francisco, California.....	1869
Younger, Edward A.....	San Francisco, California.....	1879
Total.....		258.

---

## THE ALUMNI ASSOCIATION.

---

The Alumni Association of the Medical Department of the University of California now includes in its membership most of the graduates of the institution, and the officers for the ensuing year take pleasure in announcing a prosperous outlook for the Association.

The objects of the Society are the promotion of the prosperity of our *Alma Mater*, the maintenance and cultivation of fraternal feeling among the Alumni, and the advancement of the interests of medical education and the diffusion of scientific knowledge.

Any alumnus of the Medical Department of the University, in good professional standing, is eligible to membership upon the payment of the initiation fee of five dollars, which entitles the applicant to a certificate of membership, signed by the President, Vice-President, Secretary and Executive Committee.

A life membership and certificate may be obtained by any eligible alumnus upon the payment of twenty dollars.

The Professors and Teachers in the Medical Department are entitled to honorary membership with an appropriate certificate.

The meetings during 1889 will be held monthly, at the offices of the members residing in San Francisco, and the annual meeting will be held in a public hall the early part of November. At these meetings, medical and scientific topics will be brought up for discussion and all present asked to participate.

Papers and reports of special cases are solicited from members outside of the city or abroad.

The annual banquet will be given the evening following the commencement exercises of the College.

The following officers have been elected for 1889.

L. M. F. Wanzer, M. D., President.

Francois Delmont, M. D., Vice-President.

Winslow Andersen, M. D., Secretary.

K. I. Howard, M. D., Treasurer.

*Executive Committee:*

James W. Blake, M. D.

Jules Simon, M. D.

M. W. Moody, M. D.

All alumni are cordially invited to identify themselves with the Association and assist in the promotion of its welfare.

For further particulars address the Secretary of the Association—

WINSLOW ANDERSON, M. D.,  
No. 829 Broadway St.,  
San Francisco, Cal.



## UNIVERSITY OF CALIFORNIA.

### ACADEMIC SENATE.

NOTE.—Divided into groups of Professors, Assistant Professors, Instructors and Lecturers and arranged alphabetically in each group, except the last.

The Faculties of the University, together with the Instructors, constitute by law the Academic Senate.

HORACE DAVIS, A. B., *President of the University*, PRESIDENT, Berkeley.

JOHN HARMON C. BONTÉ, D. D., *Professor of Legal Ethics*, SECRETARY,  
- - - - - Audubon Street, Berkeley.

WASHINGTON AYER, M. D., *Professor of Hygiene*, - - - - -  
- - - - - 410 Kearny Street, San Francisco.

HANS HERMAN BEHR, M. D., *Professor of Botany in the College of Pharmacy*,  
- - - - - 509 Kearny Street, San Francisco.

GEORGE WOODBURY BUNNELL, A. M., *Professor of the Greek Language  
and Literature*, - - - - - 1955 Telegraph Avenue, Oakland.

SAMUEL BENEDICT CHRISTY, PH. B., *Professor of Mining and Metallurgy*,  
- - - - - Piedmont Avenue, near Bancroft Way, Berkeley.

RICHARD BEVERLY COLE, A. M., M. D., M. R. C. S., ENG., *Professor of  
Obstetrics and Gynecology*, - - - - - 218 Post Street, San Francisco.

ALBERT STANBURROUGH COOK, PH. D., *Professor of the English Lan-  
guage and Literature*, Corner Dwight Way and Audubon Street, Berkeley.

ARNOLD ABRAHAM D'ANCONA, A. B., M. D., *Professor of Physiology  
and Microscopy*, Corner Golden Gate Avenue and Franklin Streets, San  
Francisco.

GEORGE DAVIDSON, PH. D., *Honorary Professor of Geodesy and Astronomy*,  
- - - - - 1117 Hyde Street, San Francisco.

LUIS LANE DUNBAR, D. D. S., *Professor of Operative Dentistry and Dental  
Histology, Dean of the Dental Faculty*, 500 Sutter Street, San Francisco.

STEPHEN JOHNSON FIELD, LL.D. *Honorary Professor of Law*, -  
- - - - Washington, D. C.

MELANCTHON WILLIAMS FISH, M.D., *Emeritus Professor of Physiology  
and Microscopy*, - - - - - 461 East Fourteenth Street, Oakland.

CLARK LAMOTTE GODDARD, A.M., D.D.S., *Professor of Mechanical Den-  
tistry*, - - - - - 131 Post Street, San Francisco.

GEORGE F. E. HARRISON, 1ST LIEUT. SECOND U. S. ARTILLERY, *Professor  
of Military Science and Tactics*, 2507 Sacramento Street, San Francisco.

- ROBERT PAUL HASTINGS, LL.B., *Dean of the Faculty of Law*, - - -  
 - - - - - Phelan Building, San Francisco.
- SERRANNO CLINTON HASTINGS, LL.D., *Professor of Comparative Juris-*  
*prudence*, - - - - - 636 Clay Street, San Francisco.
- FREDERICK GODFRAY HESSE, *Professor of Mechanical Engineering*, -  
 - - - - - Corner Broadway and Telegraph Avenue, Oakland.
- EUGENE WOLDEMAR HILGARD, PH.D., LL.D., *Professor of Agriculture*,  
*Agricultural Chemistry, General and Economic Botany*, - - - - -  
 - - - - - Bancroft Way, near Audubon Street, Berkeley.
- ALBERT ANDREW HOWARD, PH. D., \* *Professor of the Latin Language*  
*and Literature*, - - - - - Corner Durant Avenue and Dana Street, Berkeley.
- GEORGE HOLMES HOWISON, LL.D., *Mills Professor of Intellectual and*  
*Moral Philosophy and Civil Polity*, - - - - -  
 - - - - - Corner Piedmont Avenue, and Channing Way, Berkeley.
- ABRAHAM WENDELL JACKSON, JR., PH. B., *Professor of Mineralogy*,  
*Petrography and Economic Geology*, - - - - - Fourth University Cottage, Berkeley.
- WILLIAM WATT KERR, A.M., M.B., C.M., *Professor of Clinical Medicine*  
*and Pathology*, - - - - - 522 Sutter Street, San Francisco.
- MARTIN KELLOGG, A.M., † *Professor of the Latin Language and Literature*,  
 - - - - - Bushnell Street, near College Way, Berkeley.
- , *Professor of Therapeutics*,
- JOHN LeCONTE, M.D., LL.D., *Professor of Physics*, - - - - -  
 - - - - - Corner Mark Street and Dwight Way, Berkeley.
- JOSEPH LeCONTE, M.D., LL.D., *Professor of Geology and Natural History*,  
 - - - - - Bancroft Way, near Piedmont Avenue, Berkeley.
- ABRAHAM LEWIS LENGFELD, M.D., *Professor of Materia Medica and*  
*Medical Chemistry*, - - - - - Corner Market and Powell Streets, San Francisco.
- WILLIAM BREAKEY LEWITT, M. D., *Professor of Anatomy*, - - -  
 - - - - - 605 Laguna Street, San Francisco.
- WILLIAM HENRY MAYS, M.D., *Professor of Mental Diseases and Medical*  
*Jurisprudence*, - - - - - 330 Sutter Street, San Francisco.
- ELISHA WILLIAMS MCKINSTRY, *Professor of Municipal Law*, - - -  
 - - - - - 1518 Washington Street, San Francisco.
- ROBERT ARMISTEAD McLEAN, M.D., *Professor of Clinical and Operative*  
*Surgery and Dean of the Medical Faculty*, - - - - -  
 - - - - - 603 Merchant Street, San Francisco.
- WILLIAM FLETCHER McNUTT, M.D., M.R.C.S., AND L.R.C.P., EDIN.,  
*Professor of the Principles and Practice of Medicine*, - - - - -  
 - - - - - 405 Montgomery Street, San Francisco.

\* Serving in the absence of Professor Kellogg.

† Absent on leave.

- BERNARD MOSES, PH. D., *Professor of History and Political Economy*, -  
 - - - - Corner Bancroft Way and Piedmont Avenue, Berkeley.
- GEORGE HERMAN POWERS, A.M., M.D., *Professor of Ophthalmology and  
 Otology*, - - - - 215 Geary Street, San Francisco.
- ALBIN PUTZKER, *Professor of the German Language and Literature*, -  
 - - - - Corner Humboldt Avenue and Parker Street, Berkeley.
- WILLARD BRADLEY RISING, M.E., PH. D., *Professor of Chemistry*, -  
 - - - - Corner Chapel Street and Allston Way, Berkeley.
- EDWARD WHEELOCK RUNYON, PH. G., *Professor of the Theory and  
 Practice of Pharmacy, and Dean of the Pharmaceutical Faculty*, - -  
 - - - - 53 Stevenson Street, San Francisco.
- WILLIAM MARTIN SEARBY, PH.G., *Professor of Materia Medica in the  
 College of Pharmacy*, - - 859 Market Street, San Francisco.
- GEORGE AUGUSTUS SHURTLEFF, M.D., *Emeritus Professor of Mental  
 Diseases and Medical Jurisprudence*, - - - - Stockton.
- FRANK SOULÉ, UNITED STATES MILITARY ACADEMY, *Professor of Civil  
 Engineering and Astronomy*, - - - 960 Oak Street, Oakland.
- IRVING STRINGHAM. PH.D., *Professor of Mathematics, Dean of the Faculty  
 of Letters and of the Faculties of Science*, - - - -  
 - - - - Corner Piedmont Avenue and Bancroft Way, Berkeley.
- MAURICE JAMES SULLIVAN, D.D.S., *Professor of Dental Pathology and  
 Therapeutics*, - - - - 30 Post Street, San Francisco.
- BENJAMIN RALPH SWAN, M.D., *Professor of the Diseases of Children*, -  
 - - - - 310 Stockton Street, San Francisco.
- WILLIAM EDWIN TAYLOR, M. D., *Professor of the Principles and Practice  
 of Surgery*, - - - - 215 Geary Street, San Francisco.
- WILLIAM THEODORE WENZELL, M.D., PHARM.M., *Professor of Chem-  
 istry in the College of Pharmacy*, - 532 Market Street, San Francisco.
- , *Agassiz Professor of Oriental Languages and Literature.*
- CORNELIUS BEACH BRADLEY, A.M., *Assistant Professor of the English  
 Language and Literature*, - - 668 Eighteenth Street, Oakland.
- JOHN BERNARD CLARKE, PH.B., *Assistant Professor of Mathematics*, -  
 - - - - 318 East Seventeenth Street, Oakland.
- GEORGE CUNNINGHAM EDWARDS, PH.B., *Assistant Professor of Mathe-  
 matics*, - - - - 1568 Webster Street, Oakland.
- EDWARD LEE GREENE, PH.B., *Assistant Professor of Botany*, - - -  
 - - - - Third University Cottage, Berkeley.
- WILLIAM CAREY JONES, A.M., *Assistant Professor of United States History.*  
 - - - - Bancroft Way, near Dana Street, Berkeley.
- CHARLES WILLIAM SLACK, PH.B., LL.B., *Assistant Professor of Municipal  
 Law*, - - - - 320 California Street, San Francisco.

- FREDERICK SLATE, B.S., *Assistant Professor of Physics and Mechanics*, -  
 - - - - Audubon Street, near Bancroft Way, Berkeley.
- WILLIAM DALLAM ARMES, PH.B., *Instructor in English*, - - -  
 - - - - Corner Dwight Way and Choate Street, Berkeley.
- THOMAS RUTHERFORD BACON, A. B., *Instructor in History*, - - -  
 - - - - Corner Addison and Oxford Streets, Berkeley.
- WILLIAM WHITE DEAMER, A.B., *Instructor in Latin, and Recorder of the  
 Faculties at Berkeley*, - - - 523 Seventeenth Street, Oakland.
- HERMANN KOWER, C.E., *Instructor in Instrumental Drawing*, Fruitvale.
- EDMOND CHARLES O'NEILL, PH.B., *Instructor in Chemistry*, - - -  
 - - - - , - - - - 906 Broadway, Oakland.
- FÉLICIE VICTOR PAGET, BACHELIER ES LETTRES, BACHELIER ES  
 SCIENCES, *Instructor in the French and Spanish Languages*, - - -  
 - - - - - - - - 813 Hyde Street, San Francisco.
- WILLIAM GALT RAYMOND, C.E., *Instructor in Civil Engineering*, - - -  
 - - - - South Atherton Street, near Channing Way, Berkeley.
- JOACHIM HENRY SENGER, PH.D., *Instructor in German and Greek*, - - -  
 - - - - - - - - 2122 Steiner Street, San Francisco.
- EDWARD JAMES WICKSON, A.M., *Lecturer on Practical Agriculture, and  
 Assistant Superintendent of the Experimental Grounds*, - - -  
 - - - - - - - - Atherton Street, near Bancroft Way, Berkeley.

---

Officers of the Lick Astronomical Department.

- EDWARD SINGLETON HOLDEN, LL.D., *Director of the Lick Observatory,  
 and Astronomer*, - - - - - Mt. Hamilton.
- SHERBURNE WESLEY BURNHAM, A.M., *Astronomer*, - Mt. Hamilton.
- JOHN MARTIN SCHAEFERLE, C.E., *Astronomer*, - Mt. Hamilton.
- JAMES EDWARD KEELER, A.B., *Astronomer*, - - - Mt. Hamilton.
- EDWARD EMERSON BARNARD, *Astronomer*, - - - Mt. Hamilton.
- CHARLES BARTON HILL, *Assistant Astronomer, and Secretary and Librarian  
 of the Lick Observatory*, - - - - - Mt. Hamilton.

# UNIVERSITY OF CALIFORNIA.

## COLLEGE OF DENTISTRY.

TOLAND HALL, STOCKTON STREET, BETWEEN CHESTNUT AND FRANCISCO.

---

### FACULTY.

- HORACE DAVIS, A.B., *President of the University, and ex-officio President of the Faculty.*  
JOSEPH LECONTE, M.D., LL.D., *Honorary Professor of Biology.*  
C. L. GODDARD, A.M., D.D.S., *Professor of Mechanical Dentistry, Dental Metallurgy and Orthodontia.*  
L. L. DUNBAR, D.D.S., *Dean and Professor of Operative Dentistry and Dental Histology.*  
MAURICE J. SULLIVAN, D.D.S., *Professor of Dental Pathology and Therapeutics.*  
W. E. TAYLOR, M.D., *Professor of the Principles and Practice of Surgery.*  
A. L. LENGFELD, M.D., *Professor of Materia Medica and Medical Chemistry.*  
WILLIAM B. LEWITT, M.D., *Professor of Anatomy.*  
A. A. D'ANCONA, A.B., M.D., *Professor of Physiology.*

---

### LECTURERS, DEMONSTRATORS, AND ASSISTANTS.

- CHARLES BOXTON, D.D.S., *Lecturer on Mechanical Dentistry.*  
HARRY P. CARLTON, D.D.S., *Demonstrator of Operative Dentistry.*  
CHARLES BOXTON, D.D.S., *Demonstrator of Mechanical Dentistry.*  
M. F. GABBS, D.D.S., *Demonstrator of Continuous Gum.*  
J. T. ROWAND, D.D.S., *Demonstrator of Crown and Bridge Work.*  
JOHN M. WILLIAMSON, M.D., *Demonstrator of Anatomy.*  
WINSLOW ANDERSON, M.D., *Assistant to the Chair of Materia Medica and Medical Chemistry.*  
EUGENE PAYNE, D.D.S., *Assistant Demonstrator of Operative Dentistry.*  
S. A. HACKETT, D.D.S., *Assistant Demonstrator of Mechanical Dentistry.*  
JOHN H. BARBAT, Ph.G., M.D., *Assistant Demonstrator of Anatomy.*

---

### CLINICAL INSTRUCTORS.

- |                            |                          |
|----------------------------|--------------------------|
| H. C. DAVIS, L.D.S.        | W. E. PRICE, D.D.S.      |
| B. W. HAINES, M.D., D.D.S. | F. J. SAXE, A.M., D.D.S. |
| W. B. KINGSBURY.           | MAX SICHEL.              |
| H. E. KNOX, D.D.S.         | L. VAN ORDEN, M.D.       |
| F. J. LANE, D.D.S.         | WILLIAM WOOD.            |
| A. F. McLAIN, M.D., D.D.S. |                          |

---

The session of 1889 begins February 4th and ends October 31st.

Graduates in medicine may apply for the Degree of Doctor of Dental Surgery, after having passed *two* full years of practical instruction or experience in dentistry, *one* year of which, including one course of lectures, must be spent in this institution.

Graduates of the Dental Department are admitted to the Medical Department as students of the second year, without examination.

---

### FEES.

Matriculation (paid but once) .. \$ 5 00	Demonstrator of Anatomy's Fee. \$10 00
Tuition..... 120 00	Diploma..... 30 00

For Annual Announcement, address,

L. L. DUNBAR, Dean,  
No. 500 Sutter Street, San Francisco.

# UNIVERSITY OF CALIFORNIA.

## DEPARTMENT OF PHARMACY.

---

### CALIFORNIA COLLEGE OF PHARMACY.

---

#### FACULTY.

HORACE DAVIS, A.B.....	President of the University of California.
WILLIAM T. WENZELL, M.D., PH.G., PH.M.....	Professor of Chemistry.
HERMANN H. BEHR, M.D .....	Professor of Botany.
WILLIAM M. SEARBY.....	Professor of Materia Medica.
EDWARD W. RUNYON, PH.G.....	Professor of Pharmacy.

The Seventeenth Annual Course will begin April 1st, 1889, and continue to October 1st of the same year. Lectures will be delivered on Chemistry, Materia Medica, Botany, Theoretical and Practical Pharmacy. Arrangements have been made to provide Laboratory Instruction in Chemical and Pharmaceutical Work, and in every respect efforts will be made to keep pace with the rapid advancement of Pharmaceutical Science.

Every applicant for admission to the regular course for graduation at this College will be required to pass a preliminary examination, or to present a diploma or other satisfactory written evidence that he has passed the first grammar grade, and is entitled to enter a High School of this State, or has attended some academy of a grade equal to that of our High Schools. Those who do not present such certificates will be examined in English reading and composition, writing, geography and arithmetic.

Graduates in Pharmacy of this College are permitted to present themselves for examination for the Degree of Doctor of Medicine in the Medical Department of the University of California, after attending that school two years instead of three, as required of other students. The fees have also been reduced in like proportion to graduates in Pharmacy.

Graduates of such Medical Colleges as are recognized by the American Medical Association, will be permitted to present themselves for examination for the degree of Graduate of Pharmacy after one year's attendance at this College, provided they have complied with all the other conditions for graduation.

For Prospectus, etc., address,

EDWARD W. RUNYON, Ph.G., Dean,

53 Stevenson Street, San Francisco, Cal.



# UNIVERSITY OF CALIFORNIA.

## UNDERGRADUATE DEPARTMENTS AT BERKELEY.

### INCLUDING

- |                                    |                           |
|------------------------------------|---------------------------|
| 1. COLLEGE OF LETTERS.             | 3. COLLEGE OF MECHANICS.  |
| ( <i>a</i> ) CLASSICAL COURSE.     | 4. COLLEGE OF MINING.     |
| ( <i>b</i> ) LITERARY COURSE.      | 5. COLLEGE OF CIVIL ENGI- |
| ( <i>c</i> ) COURSE IN LETTERS AND | NEERING.                  |
| POLITICAL SCIENCE.                 | 6. COLLEGE OF CHEMISTRY.  |
| 2. COLLEGE OF AGRICULTURE.         |                           |

### Academic Staff.

HORACE DAVIS, A.B., President of the University.

GEO. WOODBURY BUNNELL, A.M., Professor of the Greek Language and Literature.

SAMUEL B. CHRISTY, PH.B., Professor of Mining and Metallurgy.

ALBERT S. COOK, PH.D., Professor of the English Language and Literature.

GEO. DAVIDSON, PH.D., Honorary Professor of Geodesy and Astronomy.

STEPHEN J. FIELD, LL.D., Honorary Professor of Law.

GEORGE F. E. HARRISON, (1st Lieut. 2d U. S. Artillery) Professor of Military Science and Tactics.

FREDERICK G. HESSE, Professor of Mechanical Engineering.

EUGENE W. HILGARD, PH.D., LL.D., Professor of Agriculture, Agricultural Chemistry, General and Economic Botany.

ALBERT A. HOWARD, PH.D., \* Professor of the Latin Language and Literature.

GEORGE H. HOWISON, LL.D., Mills Professor of Intellectual and Moral Philosophy and Civil Polity.

A. WENDELL JACKSON, JR., PH.B., Professor of Mineralogy, Petrography and Economic Geology.

MARTIN KELLOGG, A.M.,† Professor of the Latin Language and Literature.

JOHN LeCONTE, M.D., LL.D., Professor of Physics.

JOSEPH LeCONTE, M.D., LL.D., Professor of Geology and Natural History.

BERNARD MOSES, PH.D., Professor of History and Political Economy.

ALBIN PUTZKER, Professor of the German Language and Literature.

WILLARD B. RISING, M.E., PH.D., Professor of Chemistry.

FRANK SOULÉ, (U. S. Military Academy) Professor of Civil Engineering and Astronomy.

IRVING STRINGHAM, PH.D., Professor of Mathematics, Dean of the College of Letters and the Colleges of Science.

---

\* Serving in the absence of Professor Kellogg.

† Absent on leave.



C. B. BRADLEY, A.M., Assistant Professor of the English Language and Literature.

JOHN B. CLARKE, PH.B., Assistant Professor of Mathematics.

GEORGE C. EDWARDS, PH.B., Assistant Professor of Mathematics.

EDWARD L. GREENE, PH.B., Assistant Professor of Botany.

WM. CAREY JONES, A.M., Assistant Professor of History, and Instructor in Constitutional and Roman Law.

FREDERICK SLATE, B.S., Assistant Professor of Physics and Mechanics.

WILLIAM D. ARMES, PH.B., Instructor in English.

THOMAS R. BACON, A.B., Instructor in History.

WILLIAM W. DEAMER, A.B., Instructor in Latin, and Recorder of the Faculties.

HERMANN KOWER, C.E., Instructor in Instrumental Drawing.

EDMOND C. O'NEILL, PH.B., Instructor in Chemistry.

F. V. PAGET, B.S., B.L., Instructor in the French and Spanish Languages.

WM. G. RAYMOND, C.E., Instructor in Civil Engineering.

J. HENRY SENGER, PH.D., Instructor in German and Greek.

E. J. WICKSON, A.M., Lecturer on Practical Agriculture and Assistant Superintendent of the Experimental Grounds.

---

#### Assistants and Other Officers.

ELMER R. DREW, B.S., Assistant in Physics.

WILLIAM E. RITTER, B.S., Assistant in Chemistry.

ADOLPH SOMMER, PH.G., Assistant in Chemistry.

FREDERICK W. MORSE, PH.B., Assistant in the Agricultural Laboratory.

MYER E. JAFFA, PH.B., First Assistant in the Viticultural Laboratory.

GEORGE E. COLBY, PH.B., Second Assistant in the Viticultural Laboratory.

ADOLPH H. WEBER, PH.B., MET.E., Temporary Assistant in the United States Agricultural Experiment Station.

WILLIAM J. RAYMOND, B.S., Assistant in the Physical Laboratory.

EMMET RIXFORD, B.S., Assistant in the Mechanical Laboratory.

FRANKLIN BOOTH, B.S., Assistant in the Metallurgical Laboratory.

WILLIAM C. RILEY, Student Assistant in the Mineralogical Laboratory.

JOSEPH C. ROWELL, A.B., Librarian of the University.

JOSEPH D. LAYMAN, B.L., Assistant Librarian.

JOHN J. RIVERS, Curator of the University Museum.

EDWARD J. RYAN, B.S., L.L.B., Registrar of the Faculty of Law.

JOSEPH A. SLADKY, Superintendent of the Machine Shop.

FRANK H. PAYNE, M.D., Director of Physical Culture.

WALTER MAGEE, Assistant in Physical Culture.

JOSEPH W. FLYNN, University Printer.

## ORGANIZATION OF INSTRUCTION.

---

### GRADUATE COURSES.

The graduates of the University of California, or of other institutions of equal grade, who may wish to pursue advanced work, general or special, every facility is extended that the libraries, laboratories and collections of the University afford. So far as possible, courses of study will be framed to meet the requirements of such students. These courses, with the approval of the proper authority, may be so chosen by the student as to lead, respectively, to a Master's degree, to a Doctor's degree, or to a professional degree in some department of engineering.

---

### UNDERGRADUATE COURSES.

EIGHT REGULAR COURSES of Study are at present established, leading directly to corresponding degrees, namely:

In charge of the Faculty of the College of Letters :

I. THE CLASSICAL COURSE, leading to the degree of A.B. ;

II. THE LITERARY COURSE, leading to the degree of B.L. ;

III. THE COURSE IN LETTERS AND POLITICAL SCIENCE, leading to the degree of Ph.B.

In charge, severally, of the respective Faculties of the Five Colleges of Science:

IV. THE COURSE IN AGRICULTURE ;

V. THE COURSE IN MECHANICS ;

VI. THE COURSE IN MINING ;

VII. THE COURSE IN CIVIL ENGINEERING ;

VIII. THE COURSE IN CHEMISTRY ;

Each of which leads regularly to the degree of B.S.

To each of these Regular Courses there pertains an established curriculum of studies, prescribed and elective, arranged in the order of four successive years.

There are permitted, in addition, COURSES AT LARGE and PARTIAL COURSES, not leading directly to any degree, but through each of which, some one of the above-named degrees is possibly attainable.

---

## CONDITIONS OF ADMISSION AND RESIDENCE.

---

### GENERAL LIST OF PREPARATORY SUBJECTS.

Applicants for admission to undergraduate courses must be at least sixteen years of age, must deposit with the Recorder a certificate of good moral character, and must pass a satisfactory examination in each of the following subjects as are designated below for the Course and Status sought ;

I. ENGLISH. A short composition, correct in spelling, punctuation, paragraphing and grammar, upon a subject announced at the time of the examination,

and taken, until further notice, from the following works : Tom Brown's School Days at Rugby ; Scott's Lady of the Lake ; Irving's Alhambra ; Thackeray's Newcomes ; Shakespeare's Merchant of Venice and Julius Cæsar (Rolfe's, or the Clarendon Press edition.) In 1891, and thereafter, until further notice, Plutarch's Lives (Ginn's Selection) will take the place of Tom Brown's School Days in the above requirement. In 1889 and 1890 either Plutarch or Tom Brown will be accepted.

Applicants will also be required to analyze sentences from these works, and to pass an examination on the first seventy-one lessons in Kellogg's Text Book on Rhetoric.

2. ARITHMETIC. Including the metric system. The technical parts of Commercial Arithmetic, viz: banking, profit and loss, commission, taxes, duties, stocks, insurance, exchange and average of payments, are not insisted on.

3. ALGEBRA. (a) To Quadratic Equations, including the various methods of factoring, the theory of exponents, integral and fractional, positive and negative, the calculus of radicals, ratio and proportion.

(b) Quadratic Equations, both single and simultaneous, their solution and their theory, including all the recognized methods of solution and all equations reducible to the quadratic form ; formation of equations from given roots.

4. PLANE GEOMETRY. (a) All of plane geometry, except the matrical properties of regular polygons and the measurement of the circle.

(b) The general properties of regular polygons, their construction, perimeters, and areas ; and the measurement of the circle, including the different methods for determining the ratio of the circumference to the diameter.

5. HISTORY AND GEOGRAPHY. History of the United States, and the general facts of Physical and Political Geography. Barnes' Brief History of the United States, and the geographies used in the first grade grammar schools, will serve to indicate the amount of knowledge expected.

6. LATIN. Cæsar, Gallic War, Books I.-IV. (or Civil War, Books I.-II.) ; Cicero, the Four Catilinarian Orations ; with questions, in both cases, on the implied grammar, the subject-matter and the corresponding archaeology ; translation into Latin of simple English sentences.

7. LATIN. Cicero, the Orations *Pro Archia Poeta* and *Pro Lege Manilia* ; Vergil, Aeneid, Books I.-VI., with questions in both cases, on the implied grammar, the subject-matter and the corresponding archaeology, and, in the case of Vergil, on the prosody ; sight translation of easy Latin prose ; translation into Latin of brief connected narratives.

8. GREEK. Xenophon, Anabasis, Book I., with questions on the subject-matter, archaeology and grammar (with especial reference to etymology) ; White's First lessons in Greek, lessons I.-LX. ; translation into Greek of simple English sentences.

9. GREEK. Xenophon, Anabasis, Books II.-IV., or Goodwin's Greek Reader, pp. 37-111 ; Homer, Iliad, Books I.-II., omitting the catalogue of ships ; with questions on the grammar (with especial reference to etymology), subject-matter, archaeology and prosody ; Jones' Greek Prose Composition, or its equivalent ; sight translation of easy Greek prose.

10. ANCIENT HISTORY AND GEOGRAPHY. (a) Greek History to the death of Alexander, with the connected Geography.

(*b*) Roman History to the death of Commodus, with the connected Geography.

Smith's Smaller History of Greece, and Smith's Smaller (or Leighton's) History of Rome, will serve to indicate the amount required.

11. PHYSICS. The elements of the subject, taught experimentally, as shown in some such work as Gage's Elements of Physics; Peck's Ganot (or a real equivalent) will include the topics required.

12. Any one of the following :

(*a*) CHEMISTRY. The elements of Chemistry (Eliot and Storer's Chemistry, Avery's Elementary Chemistry, or a thorough acquaintance with Meads' Chemical Primer). An examination in more advanced chemistry will be offered to any who wish it. Success in such examination will give the student admission to the chemical laboratory. Applicants who pass with honors will be assigned to an advanced division.

(*b*) BOTANY. The elements of Botany. An accurate knowledge of Part I. of Gray's How Plants Grow, and an acquaintance with the more prominent native or cultivated plants, their structure and botanical affinities.

(*c*) PHYSIOLOGY. The elements of Physiology (Hutchinson's, or an equivalent).

(*d*) MINERALOGY. The elements of Mineralogy. A good knowledge of the physical properties of minerals in general. Ability to determine, by their physical properties alone, twenty-five of the commonest minerals, and to give the reasons for the determination. First seventy-two pages of Nicol's Manual of Mineralogy, or first seventy-five pages of Dana's third edition.

(*e*) PLANE TRIGONOMETRY. The development of the general formulæ of plane trigonometry, solution of plane triangles, and practice in the use of logarithmic tables. Four-place logarithmic tables are furnished for use in the examination.

(*f*) FREE-HAND DRAWING. Line drawing from models, copying of patterns, etc. Particular attention is given to correctness of form and smoothness of outline. The applicant will be tested in that free-hand use of the pencil which will be of most immediate value to him in pursuing the subject of mechanical drawing and mapping.

13. HISTORY. History of England and the English People, by G. W. Co (London, 1887), will indicate the amount. General history will be accepted instead, in unusual cases.

14. ENGLISH. The examination in this subject will presuppose thorough study of the selections named below. The candidate should be prepared to elucidate in full the meaning of any passage in the works assigned; to paraphrase such passage; to point out the rhetorical figures in it; to answer questions concerning the lives of the authors and the subject-matter and structure of the works studied. The history of words should also receive attention, Skeat's Etymological Dictionary being taken as the authority. For the present, the examination in word-derivation will be limited to Spenser's Prothalamion.

Until further notice, the examination will be upon the following works: Scott's Lay of the Last Minstrel; Whittier's Snow-Bound; Longfellow's Evangeline; Lowell's Sir Launfal; Sir Roger de Coverley; Burke's Works, edited by Payne, Vol. I.; and Hales' Longer English Poems, omitting Wordsworth's Laodamia and Shelley's Adonais. In 1891 and thereafter until further notice, Milton's

Comus (Clarendon Press or Clark and Maynard) will take the place of the following selections in Hales' Longer English Poems: Dryden's MacFlecknoe, Johnson's London and the Vanity of Human Wishes, and Scott's Cadyow Castle. In 1889 and 1890, either Comus, or the selections mentioned in Hales' will be accepted.

**SPECIMEN PAPERS.** Specimen examination papers in the foregoing subjects are contained in the Admission Circular [Bulletin No. 6] which will be sent to any address on application to the RECORDER OF THE FACULTIES, Berkeley, California.

## GROUPS OF SUBJECTS FOR THE SEVERAL COURSES.

Of the foregoing Subjects, one of the following four groups, or parts of them, must be taken, according to the Course and Status applied for :

I. For the **Classical Course**.—Subjects 1, 2, 3*a*, 4*a*, 5, 6, 7, 8, 9 and 10.

II. For the **Literary Course**.—Subjects 1, 2, 3*a*, 4*a*, 5, 6, 7, 10, 13 and 14.

III. For the **Course in Letters and Political Science**.—Subjects 1, 2, 3*a*, 4*a*, 5 ; and either 6, 7, 8, 9 and 10 ; or 6, 7, 10, 13 and 14 ; or 3*b*, 4*b*, 11, 12, and either 6 or 14.

A signal failure in Subject 14 will exclude the applicant from this Course.

IV. For any of the **five Courses in Science**.—Subjects 1, 2, 3 (*a* and *b*), 4 (*a* and *b*), 5, 11, 12, and either 6 or 14.

For a **Course at Large**, either of the four groups required for admission to a Regular Course, as the applicant may elect. And in case the applicant proposes, if admitted, to take any study out of the prescribed order, all of the examinations required for its pursuit by a Regular Student must be passed before admission.

For a **Special Course**, such of the General List of Subjects as, in the judgment of the professors or instructors in charge of the special line of studies intended, are requisite for its proper pursuit. The list thus approved must be deposited with the Recorder before the examination. No applicant who has failed in the entrance examination for a Regular Course or a Course at large will be allowed to take a Special Course.

For a **Limited Course**, Subjects 1, 2, 3*a*, 4*a*, and 5 ; and in addition, any in the General List that are requisite to the studies sought by the applicant ; if advanced studies are sought, the applicant must pass all the examinations conditional to them that are required of Regular Students. The exact list of requisite subjects must be ascertained through the Recorder, and deposited with him before the examination.

Applicants who pass their entire entrance examination without conditions will be credited with honors in the subjects in which they pass with especial excellence.



### TIMES AND PLACES OF EXAMINATION.

In June, 1889, the First Entrance Examination will be held simultaneously at Berkeley, Los Angeles, Chico and Grass Valley. It will continue through Thursday, Friday and Saturday following the annual Commencement in the College of Letters and the College of Science.

In September, the Second Entrance Examination will be held at Berkeley only. It will continue through three consecutive days, ending on Thursday, the first day of the academic year.

No applicant for admission will be examined at any other time, except for reasons of the most exceptional urgency.

---

### PRELIMINARY AND FINAL ENTRANCE EXAMINATIONS.

Any applicant for admission to a Regular Course, or to a Course at Large, may, if he prefers, divide the Entrance Examination between two years, passing part of it, on the conditions stated below, as a *Preliminary Examination* one year before his proposed admission, and the remainder as a *Final Examination* the next year. But each of these examinations must be taken as an entirety, all at one time, either in June or September; neither the preliminary or the final examination can be subdivided between June and September of the same year.

Applicants will not be admitted to the preliminary examination without certificates from their teachers, that they are prepared in the subjects they offer. These certificates must be addressed to the RECORDER OF THE FACULTIES, Berkeley, and must be in his hands previous to the examination.

Certificates of preliminary examination will only be issued for subjects passed without conditions, nor will any certificate be issued to any applicant who does not pass in at least five of the subjects offered. These subjects must be confined to Subjects 1, 2, 3*a*, 4*a*, 5, 6, 8, 10 (*a* or *b*), 11 and 13 of the General List, which must be grouped for the several Courses, as follows:

I. For the Classical Course.—Subjects 1, 2, 3*a*, 4*a*, 5, 6, 8 and 10 (*a* or *b*.)

II. For the Literary Course.—Subjects 1, 2, 3*a*, 4*a*, 5, 6, 10, (*a* or *b*), and 13.

III. For the Course in Letters and Political Science.—Subjects 1, 2, 3*a*, 4*a*, 5; and either 6, 8 and 10 (*a* or *b*), or 6, 10, (*a* or *b*), and 13; or 11 and

IV. For any of the five Courses in Science.—Subjects 1, 2, 3*a*, 4*a*, 5, 11 and 6.

For a Course at Large, either of the preceding groups. But for no course will an examination be granted on part of a subject.

---

### ADMISSION FROM APPROVED SCHOOLS.

The following Regulation has been adopted by the Board of Regents:

“Upon the request of the Principal of public or private school in California, whose course of study embraces, in kind and extent, the subjects required for admission to any College of the University at Berkeley, a committee of the Academic Senate will visit such school, and report upon the quality of the instruction there given. If the report of such committee be favorable, a graduate

of the school upon the personal recommendation of the Principal, accompanied by his certificate that the graduate has satisfactorily completed the studies of the course preparatory to the College he wishes to enter, may, at the discretion of the Faculty of such College, be admitted without examination.

“All applications made in accordance with the provisions of the foregoing paragraph must be in the hands of the Recorder of the Faculties at Berkeley, on or before the twenty-first of March of each year.”

#### EXPENSES OF STUDENTS.

Tuition in the College of Letters and the Colleges of Science is free.

Each student on entering any of the colleges at Berkeley, is required to deposit ten dollars with the Secretary. This deposit, if the student graduates, will constitute the payment for his diploma. If he leaves the University before graduation, the money will be returned to him on presentation of the Secretary's receipt for it.

From each student who desires to draw books from the Library an additional deposit of five dollars is required; this sum, less any unpaid fines or charges, will be returned to him when he finally severs his connection with the University.

In the laboratories a small charge is made for chemicals actually used.

Every member of the battalion is required to procure a uniform on entrance.

Board and lodging may be obtained in private families at Berkeley and Oakland at from eighteen dollars to thirty dollars a month. The hours of recitation are such that many students reside in Oakland and San Francisco. The journey from San Francisco to the University requires from an hour to an hour and a quarter.

Students in the College of Agriculture can occasionally find work in connection with the instruction in agriculture and horticulture. Several students find occasional employment in the University printing office at a fair compensation.

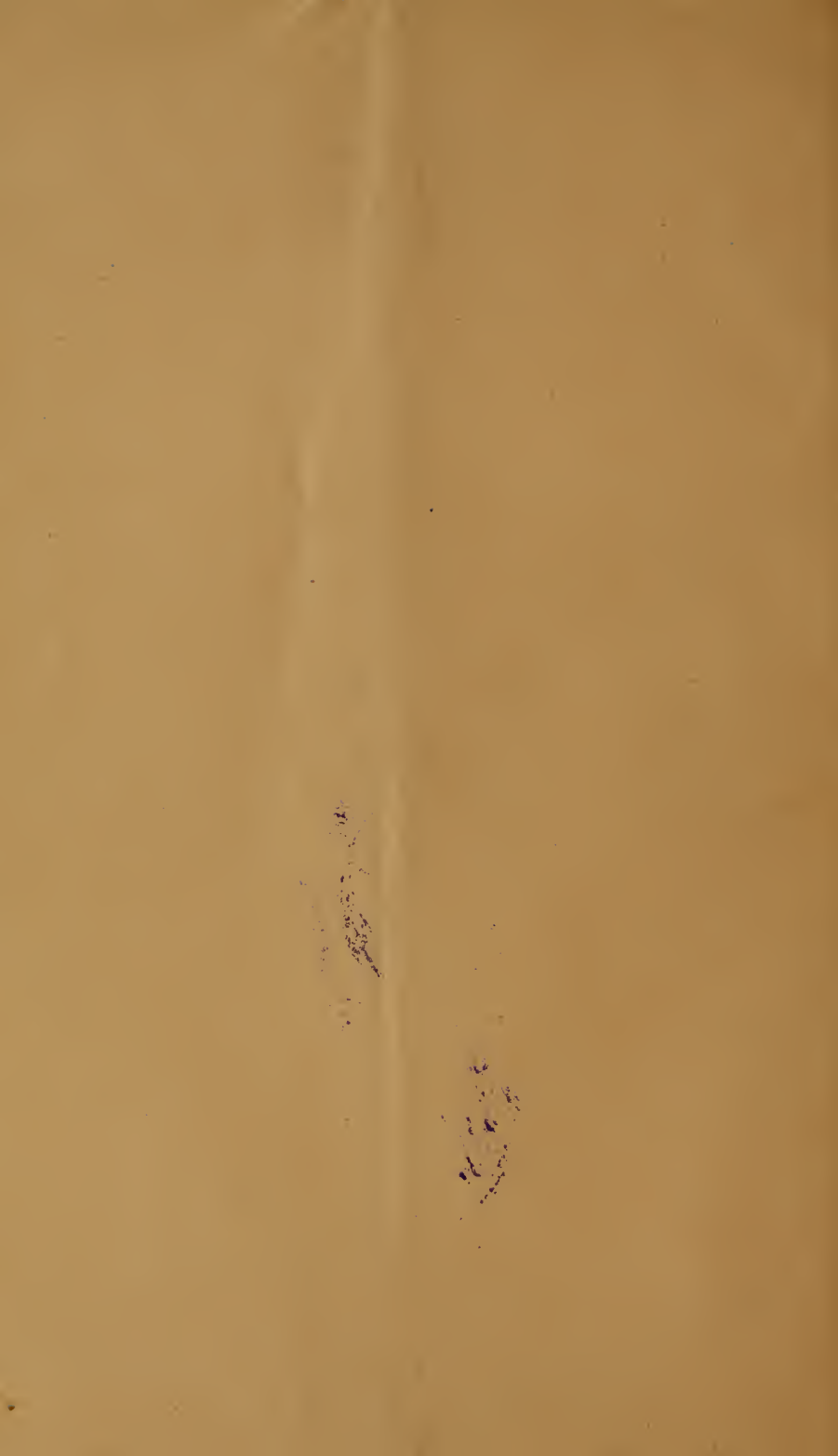
---

More detailed information concerning the foregoing matters, and concerning the College of Letters and the College of Science in general is contained in the Admission Circular (Bulletin No. 6), and the University Register, either of which will be sent to any address upon application to the RECORDER OF THE FACULTIES, Berkeley, California.

THE LIBRARY OF THE  
FEB 26 1931  
UNIVERSITY OF ILLINOIS.







C  
C12 w Z m  
1889/90

ANNOUNCEMENT

OF THE

TWENTY-SEVENTH ANNUAL

# Course of Lectures

OF THE

*Medical Department,*

*UNIVERSITY OF CALIFORNIA,*

WITH

## CATALOGUE

OF

STUDENTS AND GRADUATES.

1890.

Alumni of the Medical Department of the University,  
and others desiring to receive the ANNOUNCEMENT regularly, are requested  
to send their names and addresses to the Dean.

SAN FRANCISCO:  
P. M. DIERS & Co., PRINTERS.  
1890.



THE LIBRARY OF THE  
FEB 26 1931  
UNIVERSITY OF ILLINOIS  
ANNOUNCEMENT  
OF THE

TWENTY-SEVENTH ANNUAL

# Course of Lectures

OF THE

Medical Department,

UNIVERSITY OF CALIFORNIA,

WITH

## CATALOGUE

OF

STUDENTS AND GRADUATES.

1890.

---

Alumni of the Medical Department of the University,  
and others desiring to receive the ANNOUNCEMENT regularly, are requested  
to send their names and addresses to the Dean.

---

SAN FRANCISCO:  
P. M. DIERS & Co., PRINTERS.  
1890.

# UNIVERSITY OF CALIFORNIA.

## BOARD OF REGENTS.

### EX-OFFICIO REGENTS.

HIS EXCELLENCY R. W. WATERMAN.....	SACRAMENTO
<i>Governor, ex-officio President of the Board.</i>	
HIS HONOR S. M. WHITE .....	LOS ANGELES
<i>Lieutenant-Governor.</i>	
HON. ROBERT HOWE ...	SONOMA
<i>Speaker of the Assembly.</i>	
HON. IRA G. HOITT .....	SACRAMENTO
<i>State Superintendent of Public Instruction.</i>	
HON. CHRISTOPHER GREEN .....	STOCKTON
<i>President of the State Agricultural Society.</i>	
DAVID KERR, ESQ.....	SAN FRANCISCO
<i>President of the Mechanics' Institute.</i>	
HORACE DAVIS, A.B.....	SAN FRANCISCO
<i>President of the University.</i>	

### APPOINTED REGENTS.\*

NAME.	ADDRESS.	TERM EXPIRES
REV. HORATIO STEBBINS, D.D.,	1609 Larkin St., San Francisco,	- 1894
HON. JOHN S. HAGER, LL.D.,	Pacific Union Club, San Francisco,	1894
HON. J. WEST MARTIN,	Oakland, - - - - -	1898
CHAS. F. CROCKER, ESQ.,	4th & Townsend Sts., San Francisco,	1904
A. S. HALLIDIE, ESQ.,	329 Market St., San Francisco,	- 1892
HON. WILLIAM T. WALLACE,	799 Van Ness Ave., San Francisco,	1902
JOHN L. BEARD, A.M.,	Centreville, - - - - -	1892
J. F. HOUGHTON, ESQ.,	Palace Hotel, San Francisco,	- 1904
HON. T. GUY PHELPS,	Belmont, - - - - -	1896
I. W. HELLMAN, ESQ.,	Los Angeles, - - - - -	1902
GEORGE T. MARYE, JR., LL.B.,	234 Montgomery St., San Francisco,	1898
ARTHUR RODGERS, A.B., Ph.B.,	309 Montgomery St., San Francisco,	1890
GEORGE J. AINSWORTH, Ph. B.,	North Temescal, - - - - -	1900
D. M. DELMAS, A. M.,	327 Pine Street, San Francisco,	- 1900
ALBERT MILLER, ESQ.,	S. F. Savings Union, San Francisco,	1890
COLUMBUS BARTLETT, ESQ.	12 Montgomery St., San Francisco,	1896
J. H. C. BONTÉ, D.D., Secretary, Berkeley.		

Regular meetings of the Board of Regents are held six times a year, viz., on the second Tuesday of September, November, January, March, and May, and on the Tuesday preceding the last Wednesday in June.

\* In the order of original appointment.



# UNIVERSITY OF CALIFORNIA.

## MEDICAL DEPARTMENT.

---

### FACULTY.

HORACE DAVIS, A.B., President of the University.

G. A. SHURTLEFF, M.D., Emeritus Professor of Mental Diseases and Medical Jurisprudence.

M. W. FISH, M.D., Emeritus Professor of Physiology and Microscopy.

R. BEVERLY COLE, A.M., M.D., M.R.C.S., Eng., Professor of Obstetrics and Gynecology.

W. F. McNUTT, M.D., M.R.C.P., Edin., etc., Professor of Principles and Practice of Medicine.

ROBERT A. McLEAN, M.D., Professor of Clinical and Operative Surgery, Dean.

W. E. TAYLOR, M.D., Professor of Principles and Practice of Surgery.

A. L. LENGFELD, M.D., Professor of Materia Medica and Medical Chemistry.

WM. B. LEWITT, M.D., Professor of Anatomy.

BENJ. R. SWAN, M.D., Professor of Diseases of Children.

WM. H. MAYS, M.D., Professor of Mental Diseases and Medical Jurisprudence.

WASHINGTON AYER, M.D., Professor of Hygiene.

GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology and Otology.

WM. WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.

ARNOLD A. D'ANCONA, A.B., M.D., Professor of Physiology.

DOUGLAS W. MONTGOMERY, M.D., Professor of Pathology and Microscopy.

—————, Professor of Therapeutics.

JOHN M. WILLIAMSON, M.D., Lecturer on Descriptive Anatomy.

JOHN H. BARBAT, Ph.G., M.D., Demonstrator of Anatomy.

WINSLOW ANDERSON, M.D., Assistant to the Chair of Materia Medica and Medical Chemistry.

JULES SIMON, M.D., Assistant to the Chair of Mental Diseases and Medical Jurisprudence.

C. A. VON HOFFMAN, Assistant to the Chair of Obstetrics and Gynecology.

---

### College Dispensary Staff.

JULES SIMON, M.D.

H. W. DODGE, M.D.

D. W. MONTGOMERY, M.D.

---

ROBERT A. McLEAN, M.D., Dean,

603 Merchant Street, corner of Montgomery,

San Francisco, Cal.

### CALENDAR.

THE PRELIMINARY TERM of 1890 will open on Monday, March 3d, and close on Saturday, May 10th.

THE REGULAR TERM will open on Monday, June 2d, and close on Friday, October 31st.

THE MATRICULATION EXAMINATIONS will be held at the College building on March 1st and May 31st.

THE DIDACTIC LECTURES are delivered at the College building (Toland Hall), Stockton street, below Chestnut, San Francisco.

THE CLINICAL LECTURES are delivered at the City and County Hospital, Twenty-second street and Potrero avenue.

THE ANNUAL COMMENCEMENT for conferring the degree of Doctor of Medicine will be held early in November, in San Francisco.

## TWENTY-SEVENTH ANNUAL COURSE OF INSTRUCTION.

SESSION OF 1890.

The Medical Department of the University of California was organized in 1872, as an integral part of the State's Educational center. It was among the first to adopt the higher standard of Medical Education; having, as early as 1875, instituted a three years' course and graded studies, and in 1885 an examination for admission to the College.

The changes introduced into the curriculum of this school, and now in force, may be summarized as follows:

1. *Increase of the time of study to three years.* Three regular courses of lectures of five months each, attended through three several years, are required before the student can present himself for graduation. Students are also required to attend the clinics regularly throughout the term, and senior students to attend the preliminary term.

2. *Yearly examinations.* At the beginning of each session, examinations are held to determine the progress of the student during the year past, his advancement depending on the result of such examinations.

3. *Graded studies.* By this arrangement the student is thoroughly drilled in the elementary subjects before proceeding higher. He is, however, expected to attend all the lectures, giving most of his hours of study to the subjects allotted to his own year.

The following are the subjects apportioned to each year's studies:

*First Year.* Anatomy, Physiology, Histology and Microscopy, Materia Medica and Medical Chemistry, Pharmacy, Dissections, Dispensary and Laboratory Work. Final examinations at the end of the first year in Pharmacy and Laboratory Work.

*Second Year.* Anatomy, Physiology, Materia Medica and Medical Chemistry, Principles and Practice of Medicine, Principles and Practice of Surgery, Therapeutics, Histology and Pathology, Obstetrics, Clinical Medicine, Clinical Surgery, Hygiene, Dissections, Dispensary Clinics. Final examinations at the end of the second year in Physiology, Materia Medica and Medical Chemistry, Histology and Hygiene.

*Third Year.* Principles and Practice of Medicine, Principles and Practice of Surgery, Obstetrics and Gynecology, Therapeutics, Clinical Medicine and Pathology, Clinical Surgery, Mental Diseases and Medical Jurisprudence, Diseases of Children, Ophthalmology and Otology, Anatomy, Special Clinics.

Graduates of this College, and those holding certificates of attendance upon lectures, are credited for the full time of their medical studies by the Royal College of Surgeons of England, Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow.

#### LOCATION.

While the several other Colleges of the State University are clustered at Berkeley, its Medical Department is, for obvious reasons, situated in San Francisco. The Medical College building, known as "Toland Hall," in honor of its illustrious founder, is one of the most complete and stately in the country. It is located near North Beach, overlooking the Golden Gate, a locality favoring the health and industrious habits of the students.

The Lecture Hall of the College is capable of seating five hundred persons; the Clinical Amphitheater is about equally as capacious; the Museum contains an extensive collection of specimens and preparations; the Dissecting Room is fitted up with all the modern improvements; the Laboratory is replete with all chemicals and apparatus necessary for practical teaching. A suite of apartments in the building is set apart for the Dispensary Clinics.

The College stands near the terminus of the Omnibus line of street-cars, the North Beach and Mission line, and of the Powell street cars.

#### THE COLLEGIATE YEAR.

Contrary to the custom of Eastern Medical Colleges, the lectures in this school are delivered during the Spring and Summer months. The peculiar climate of San Francisco renders spring and summer far the preferable season for prosecuting medical studies; hence the sessions are held from March to November. During this period, and indeed largely throughout the other months of the year also, cool trade-winds blow across the city daily, moderating the temperature, and particularly favoring the study of practical anatomy and necroscopy. The student in this city enjoys rare natural advantages for the healthful pursuit of his labors, such a contingency as his detention from lectures or clinics by stress of weather being absolutely unknown.

The College year is divided into two terms: The Preliminary or Spring Term, and the Regular or Summer Term.

THE PRELIMINARY TERM commences March 3d, and ends May 10th. During this term subjects are dwelt upon that do not receive the full meed of attention during the Regular Term. Clinics proceed at the Hospital and College as during the Regular Term. The Dissecting Room is open for practical work. All students are expected to attend this course, although such attendance is not compulsory, except to members of the senior class.

THE REGULAR TERM begins on Monday, June 2d, and terminates on Friday, October 31st. During this term all the branches of medicine and surgery are taught, didactically and clinically. Regular clinics are held three days each week, at the City and County Hospital, where the Professors of the clinical chairs have charge of wards and possess every advantage for the instruction of students; clinics are also held at the College Dispensary. Lectures are given daily by the Professors, and evening recitations are held three times a week.



## METHODS OF INSTRUCTION.

---

The course of studies pursued at this school comprises Clinical, Didactic, and Laboratory teaching. Special prominence is given to the first, although it is endeavored that the three methods shall be so blended as to form one harmonious whole.

---

### CLINICAL TEACHING.

*In Clinical Teaching*, the plan pursued by the several Clinical Professors has for its aim the actual confronting of the student with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis.

The facilities for clinical studies open to the students of the University have been largely increased. Full access is given to the City and County Hospital, a complete and modern structure containing five hundred beds, and presenting for observation perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, giving them unusual advantages for developing clinical material. The Professor of Clinical Surgery has charge of three surgical wards (thirty-two beds in each,) the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology and the Professor of Ophthalmology one ward each. Autopsies are conducted three times a week in the Mortuary by the Pathologist. A large operating theatre has been erected, where the major and minor operations of surgery are performed in view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second street with Potrero avenue, and is accessible from the North Beach and Mission cars, the Omnibus and the Mission street lines.

### HOSPITAL CLINICS.

**Clinical Surgery.**—Professor McLean delivers clinical lectures on Practical and Operative Surgery, at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout the session. Especial attention is given in a ward devoted to the purpose to the conduct of disorders of the genito-urinary organs and venereal diseases. A course on Minor Surgery is also given. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, etc.

**Clinical Medicine.**—Professor W. W. Kerr will deliver a course of lectures on Clinical Medicine at the same Hospital each Tuesday, Thursday and Saturday. The course of study will consist in the demonstration of cases illustrating the different phases and peculiarities which disease assumes, the examination of patients at the bedside by the student under the guidance of the Professor, together with the instruction in all those details which qualify the student to discharge his duty agreeably and efficiently in the sick room.

**Gynecology and Practical Midwifery.**—Professor R. Beverly Cole holds a Thursday Clinic, including a course of instruction in Operative Gynecology, the use of instruments, appliances, etc. He will also devote a portion of his lectures to Clinical Midwifery, taking as illustration such cases of interest as may occur in the Lying-in ward from time to time. The senior students will each, in rotation, have opportunities for the study of Practical Obstetrics at the bedside.

**Ophthalmology and Otology.**—Professor Powers will deliver one didactic lecture a week during the course, covering the subjects of the Eye and Ear, Larynx, Pharynx, Naso-Pharynx and Nasal Cavities. These lectures will be illustrated by models, charts and blackboard drawings. He will also conduct two clinics a week at the City and County Hospital, where, in addition to operative and severe cases, he has a large out-patient clinic, including many children, with many illustrations of cases as they appear in daily practice. At these clinics the third-year students are required, in turn, to keep the record of the cases, with a view to cultivating a habit of case-writing. Once in two weeks Professor Powers has an evening "Quiz" for the third-year students, which is conducted in turn by the students themselves, under the personal supervision of the Professor.

#### COLLEGE DISPENSARY CLINICS.

The Faculty has organized a Free Dispensary Clinic, which is held at the College building, on Tuesdays and Thursdays at 4 p. m.

---

### DIDACTIC TEACHING.

---

A brief outline of the course pursued by the several departments will be found in the following summary:

**Surgery.**—Professor Taylor delivers two lectures each week on the art and science of surgery. The more recent views on the management of surgical conditions and the appliances devised for their relief are particularly dwelt upon and illustrated with drawings and models when necessary. The course will include a series of lectures upon operative surgery, with demonstrations on the cadaver. The students will be drilled in the manipulation of instruments used in the various operations.

**Practice of Medicine.**—Professor W. F. McNutt presents in his lectures the principles and practice of medicine in its modern aspects. He gives a description of the different diseases, their etiology, pathology, symptoms, diagnosis, prognosis and treatment. The various pathological changes are demonstrated by means of plates, preparations, and recent specimens of diseased parts.

**Obstetrics.**—The science and art of obstetrics are taught by Professor R. Beverly Cole. His lectures are fully illustrated by the use of colored plates and drawings, prepared specimens, and the manikin. The principal obstetric operations are performed on the cadaver in presence of the class.



**Physiology.**—The lectures in this department by Professor D'Ancona embrace a consideration of both general and special physiology, including all that has been developed up to the present time, and are illustrated by a complete series of colored drawings, prepared exclusively for these lectures. Besides which, the large collection of preparations and drawings of the Scientific Department at Berkeley are at the command of the Professor. Vivisections are practiced when necessary, and the use of the microscope fully taught.

The course embraces the lectures of two years, one year being devoted to the physiology of the nervous system and reproduction, the other to nutrition, respiration, circulation, etc.

**Therapeutics (Medical and Surgical).**—The lectures in this department, by Dr. Simmons, will explain the physiological actions and therapeutic indications of all agents, medical and surgical, used for the cure, alleviation or prevention of diseases. The action of drugs will be shown by practical demonstrations upon living animals.

**Materia Medica and Medical Chemistry.**—Professor A. L. Lengfeld, in his course, will deliver two lectures each week, devoting particular attention to that part of Materia Medica and Chemistry which pertains more particularly to practical medicine and pharmacy, and using for this purpose all necessary philosophical and chemical apparatus. Special attention will be given to Prescription Writing, Urine Analysis, and Toxicology, and to the nature, origin, physical and chemical properties of the various remedies officinal in the United States Pharmacopœia.

Dr. Winslow Anderson, assistant to the Chair of Materia Medica and Medical Chemistry, will conduct the Laboratory investigations, including qualitative analysis and recitations at least three hours each week during the term.

**Anatomy.**—Professor Lewitt's lectures on Anatomy are illustrated by the cadaver, and by both wet and dry preparations, models, manikin and drawings, and include a course on general, special and topographical anatomy. The Dissecting Room is spacious, well ventilated, lighted from above, and provided with every convenience. It is open throughout the year, under the superintendence of the Professor and Demonstrator of Anatomy. A supply of material is always procurable at small cost. When dissections are conducted in a diligent manner, the student is furnished with certificates stating the amount and part dissected.

**Gynecology.**—This subject is taught didactically and clinically by Professor Cole. The use of gynecological instruments is carefully shown, and the several procedures explained by means of colored charts, diagrams and manikins.

**Hygiene.**—The importance now attaching to the science of Hygiene induced the Regents and Faculty to give it a place in the curriculum of the school. The instruction in this department will be in charge of Professor Washington Ayer.

**Diseases of Children.**—Professor Swan will devote one hour each week to this subject, illustrating his lectures by notes drawn from an unusually large experience in the management of diseases peculiar to children.

**Mental Diseases.**—The lectures by Professor Mays, late Superintendent of the State Asylum for the Insane at Stockton, on this subject, aim to impart a practical acquaintance with the forms and manifestations of insanity. The causation and prophylaxis of mind disorders receive special consideration. A supplementary series of lectures is given by the Professor, on the *Medical Jurisprudence* of Insanity.

**Histology and Pathology.**—Professor D. W. Montgomery will strive to make this course as practical as possible. Sections of normal tissues and diseased organs ready for mounting will be given to the students, so that they may become familiarized with the methods of preparing specimens for examination. In this way the general principles of normal growth and development, and the operation of pathological laws, will be illustrated and fixed in the mind of the student. The use of the microscope as an aid to diagnosis in the examination of sputum, urine, blood, etc., will also be, in this way, illustrated as opportunity arises.

#### HOSPITAL INTERNES.

The position of Interne in the City and County Hospital is open each December to three members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year, and secure opportunities for accumulating an invaluable experience in every field of practical medicine and surgery.

---

### THE HIGHER STANDARD OF EDUCATION.

---

#### REQUIREMENTS FOR ADMISSION.

In addition to the curriculum already instituted—namely, a three years' graded course of study, with yearly examinations—

A matriculation examination is required in the following subjects:

1. **ENGLISH.**—A written composition not to exceed one page foolscap in length, upon some subject connected with American history or biography.
2. **ARITHMETIC.**
3. **GEOGRAPHY.**
4. **PHYSICS.**

No matriculation examination will be required of candidates who have received a Collegiate Degree, or who have passed the examination for admission to, or are graduates of, the College of Letters or of Science of the University of California, or who have passed the matriculation examination of any recognized college, or who present a certificate covering the required subjects from a recognized Normal or High School.

Students who have attended one full course in any recognized Medical College, will, upon satisfactory examination in the curriculum provided for the first year, be admitted as students of the *second course* in the University of California.

Students, who have attended two courses in any recognized Medical College, will be admitted as students of the *third course* in this institution, on passing a satisfactory examination in the curriculum provided for the second year.

Graduates of other regular Medical Colleges in good standing will be admitted as students of the *third course* in this institution without any examination.

Graduates of Pharmaceutical and Dental Colleges in good standing are admitted to the second year without examination.

Theological and Law Students will be admitted to special lectures without examination.

The matriculation examinations will be conducted at the College building on March 1st and May 31st.

---

#### REQUIREMENTS FOR GRADUATION.

I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character.

II. He must have studied medicine three full years, and must have attended three regular courses of lectures, the last of which must have been that of the University of California.

III. He must have passed the required examinations, written and oral.

IV. He must have pursued the study of practical anatomy during at least two sessions, and must present certificates of having dissected every part of the cadaver.

V. He must have paid in full the College fees, including the graduation fee.

---

#### BOARDING.

The expense of living in San Francisco is not great. Good board with room-rent may now be procured at the low rate of five dollars per week, at a convenient distance from the College building. Students from a distance may learn the address of these boarding-houses, and other information, by calling on the Dean of the Faculty, Dr. R. A. McLean, 603 Merchant street, corner of Montgomery.

---

#### FEEES.

Matriculation Fee (paid but once).....	\$ 5
Demonstrator's Ticket.....	10
Fee for the First Course of Lectures.....	130
Fee for the Second Course of Lectures.....	130
No Fee is required for the Third Course of Lectures.	
Graduating Fee.....	40

---

Students who have already attended two full courses of lectures in other regular schools, and graduates of other regular schools who will be of less than three years' standing at the end of a given session, are admitted to the full course of lectures of such session (not including prac-

tical anatomy) on the payment of the matriculation fee and sixty-five dollars.

Graduates of other regular schools who will be of three years' standing at the end of a given session are admitted to all the didactic and clinical lectures of such session on payment of the matriculation fee only.

---

TEXT-BOOKS AND WORKS OF REFERENCE.

- ANATOMY—Gray, Holden, Weisse, Quain, Ford's Questions.  
 PHYSIOLOGY—Flint, Foster, Landois.  
 CHEMISTRY—Lloyd's Chemistry of Medicines, Bartley, Witthaus.  
 HISTOLOGY—Rindfliesch, Stricker.  
 SURGERY—Ashurst, Bryant, Agnew, Toland, Erichsen.  
 PRACTICE OF MEDICINE—Loomis, Reynolds, Strumpell, Niemeyer.  
 CLINICAL MEDICINE—Da Costa, Hartshorne, Flint.  
 MIDWIFERY—Leishman, Playfair, Bedford, Lusk.  
 GYNECOLOGY—Thomas, Emmet, Sims.  
 MATERIA MEDICA—United States Pharmacopœia, Dispensatories (U. S. and National).  
 THERAPEUTICS—Brunton, Wood, Bartholow, Ringer.  
 OPHTHALMOLOGY—Williams, Wells.  
 OTOTOLOGY—Roosa, Burnett.  
 RHINOSCOPY—Robinson, McKenzie.  
 PEDIATRICS—Lewis Smith, Meigs and Pepper, Eustace Smith.  
 DERMATOLOGY—Fox, Neumann, Duhring.  
 MENTAL DISEASES AND MEDICAL JURISPRUDENCE—Maudsley, Bucknell and Tuke, Reese, Taylor.  
 PATHOLOGY—Wagner, Delafield, Coates.  
 LARYNGOLOGY—McKenzie, Cohen.  
 PRESCRIPTION WRITING—Mann, Gerrish.  
 URINE ANALYSIS—Legge, Hoffmann and Ultzmann.

---

GRADUATES—1889.

Bunker, Robert E.	Bloomington Ferry, Minnesota
Foreman, Francesca I.	San Francisco, California
Gleaves, Christopher C.	Anderson, California
Haskin, William H.	San Francisco, California
Holmes, Edward R.	Walla Walla, Washington
Jones, Ottowell W.	San Francisco, California
Kawakami, Masayasu	Japan
Marx, Frances R.	San Francisco, California
Mayer, Oscar J.	San Francisco, California
Mather, Squire R.	Kelseyville, California
O'Brien, Aloysius P.	Port Townsend, Washington
Oliver, Joseph A.	San Francisco, California
Tuggle, Samuel P.	Memphis, Tennessee
Wade, Mark S.	San Francisco, California
Zeyn, Gustav C.	Anaheim, California



**MATRICULANTS—1889.**

Atwater, Charlotte	Winchester, Massachusetts
Anzal, E. W., M.D., (U. S. N.)	New Orleans, Louisiana
Baker, H. A.	Rochester, New York
Blake, C. P.	San Francisco, California
Bond, Fred. T., Ph.G.	Vallejo, California
Burnham, C. J.	Folsom, California
Burns, Geo. A.	Lowell, Massachusetts
Callegaris, Joseph, Ph.G.	San Francisco, California
Campbell, Palmerston C.	Suisun, California
Casterline, Edwin D.	Oil City, Pennsylvania
Colditz-Olsen, Marie	Sweden
Collischoun, Philip	Oakland, California
Comyns, James E.	San Francisco, California
Crook, Emma E.	Paia, Hawaii
Dickenson, Frank W.	Rocky Hill, Connecticut
Donohue, Thomas	Parsons Town, Ireland
Dunbar, A. W.	Cannon Falls, Minnesota
Elwert, C. P., Ph.G.	Portland, Oregon
Felt, Rae	Eureka, California
Fitzgibbon, F. T.	Sacramento, California
Fleming, B. F.	San Francisco, California
Ford, Campbell	Frankford, Missouri
Garcia, Frank	San Leandro, California
Gibbon, James E.	San Francisco, California
Gleaves, Archibald D.	Anderson, California
Haraszthy, Carlos	San Francisco, California
Hassain, Syed Abul	Calcutta, Bengal
Hawkins, William J.	San Francisco, California
Hunkin, Samuel J.	England
Ingram, F. S.	San Leandro, California
Iredale, Charles W.	San Francisco, California
Johnson, Rena	Richmond, Virginia
Jones, C. E.	Murphys, California
Kirby, William T. G.	San Francisco, California
Kugeler, Henry, B.A.	San Francisco, California
Lagan, Edward	Londonderry, Ireland
Larkey, Frank X.	San Francisco, California
Looney, M. S. A., D.Sc., LL.D., Ph.D.	San Francisco, California
Macdonald, J. M.	Nova Scotia
Macinnis, Martin B.	Prince Edward's Island, Canada
Mann, Charles S.	Newport, Oregon
Mano, Ito	Japan
Martinez, Juan M.	Guatemala
McConnell, B. F.	Humboldt, California
Meyer, Albert G.	San Francisco, California
Milton, Joseph L.	Oakland, California
Minor, Geo. W., Ph.G.	San Francisco, California

Mish, Solomon C.....	San Francisco, California
Mohun, Chas. C.....	Sacramento, California
Molony, J. J., Ph. G.....	San Francisco, California
Moore, Frank E.....	Boston, Massachusetts
Morse, Fred. W.....	Decorat, Iowa
O'Donnell, Geo. W.....	San Francisco, California
Osamu, Ito.....	Japan
Oviedo, L. P.....	San Francisco, California
Payne, Redmond W.....	Novato, California
Pitblado, J. M.....	Truro, Nova Scotia
Quigley, J. M.....	San Francisco, California
Read, J. B. H.....	Vallejo, California
Sanborn, F. H.....	Indianapolis, Indiana
Sato, Yujiro.....	Japan
Schmidt, Theodor.....	Alameda, California
Shurtleff, Benj. E.....	Napa, California
Sims, J.....	San Francisco, California
Smith, Henry P.....	Cloverdale, California
Smith, H. S.....	Sacramento, California
Smith, W. O.....	Vermont
Snook, J. P.....	Sacramento, California
Spring, Charlotte B.....	San Francisco, California
Stanton, Edward B.....	San Francisco, California
Surryhne, Benj. F.....	Oakland, California
Takashima, Youkichi.....	Japan
Thevenet, E. J., Ph.G.....	London, England
Thrasher, Marion.....	Connersville, Indiana
Tiedeman, Carl W. von.....	New York
Tormey, James P.....	Pinole, California
Tyrrell, G. G.....	Sacramento, California
Warner, J. K.....	Shullsburg, Wisconsin
Wayson, J. T.....	Port Townsend, Washington
*Wrenn, J. M.....	Noblesville, Indiana
Wright, J. M.....	Belmont, Wisconsin
Zinkeisen, Oscar T., A.B.....	Cross Plains, Wisconsin

# SUMMARY.

Graduates, 1889.....	15
Undergraduates, 1889.....	82
Total.....	97

\* Deceased.



# COMPLETE LIST OF GRADUATES.

Addington, D. M.	Michigan Bar, California	1879
Allen, Edward O.	New York, New York.	1875
Alexander, Monrove E.	Albany, Oregon.	1888
Anderson, J. A.	Kansas.	1873
Anderson, Winslow.	San Francisco, California.	1884
Armistead, Howell V.	Modesto, California.	1885
Baldwin, Robert O.	Danville, California.	1885
Barbat, John H., Ph.G.	San Francisco, California.	1888
Barber, Edward T.	Eel River, California.	1866
Bates, Charles B.	Oroville, California.	1868
Bates, Walter E.	Oakland, California.	1881
Beardsley, E. M.	San Francisco, California.	1881
Beaumeister, B. H.	San Francisco, California.	1882
Beede, William M. S.	Bakersfield, California.	1884
Benedict, C. W.	Virginia.	1875
Bettleheim, A. F.	San Francisco, California.	1880
Biggs, F. P.	Valparaiso.	1874
Blake, Chas. M.	San Francisco, California.	1876
Blake, James W.	San Francisco, California.	1874
Bordé, Henry J.	San Jose, California.	1883
Bradbury, Geo. F.	San Francisco, California.	1878
Brannan, J. J.	Berkeley, California.	1876
Brierly, Conant B.	San Francisco, California.	1876
Briggs, M. W.	Santa Barbara, California.	1870
Bromly, R. I.	Oakland, California.	1878
Brown, Ernest S.	San Francisco, California.	1886
Brown, Geo. J.	Biggs Station, California.	1876
Bruns, W. C.	San Francisco, California.	1878
Buckley, Vincent P.	San Francisco, California.	1884
Bunker, Robert E.	Bloomington Ferry, Minnesota.	1889
Burchard, L. S.	Oakland, California.	1882
Cairns, John C.	San Francisco, California.	1876
Calbreath, John F.	Weston, Virginia.	1875
Caldwell, H. H.	San Jose, California.	1880
Caldwell, Robert.	San Jose, California.	1869
Callaghan, D. T.	Grand Gulf, Mississippi.	1873
Cameron, James S.	San Francisco, California.	1868
Chaigneau, V. A.	San Francisco, California.	1876
Churchill, Leonard.	San Francisco, California.	1871
Chalmers, Wm. P.	Watsonville, California.	1886
Clark, J. J.	San Francisco, California.	1869
Clark, Wm. D.	San Francisco, California.	1884
Clinton, C. A.	San Francisco, California.	1881
Cluness, Wm. R., Jr.	Sacramento, California.	1887
Cochran, W. A.	San Francisco, California.	1869
Conlan, Wm. E.	San Francisco, California.	1886
Collins, Addison C.	Davisville, California.	1885
Connolly, John J.	San Francisco, California.	1878

Connolly, Thos. E.	Vallejo, California	1884
Cook, Frank S.	Tucson, Arizona	1887
Corbett, S. J.	San Francisco, California	1868
Cox, Rosamond L.	New York, New York	1888
Cox, Thos. H.	San Francisco, California	1873
Curran, Mary K.	San Francisco, California	1878
Damour, Ferdinand	San Francisco, California	1864
D'Ancona, Arnold A., A.B.	San Francisco, California	1884
Davie, J. C., Jr.	Victoria, Vancouver's Island	1864
Davidson, Joseph R.	Salem, Oregon	1875
Dawson, Alson	New York, New York	1875
Day, John G.	San Francisco, California	1884
Dean, Andrew J.	San Francisco, California	1881
Delmont, Francois	San Buenaventura, California	1874
Dennis, Nathan P.	San Francisco, California	1888
Deputy, Anson A.	San Francisco, California	1881
Dodge, Henry W.	San Francisco, California	1884
Downs, George W.	Vallejo, California	1879
Drinkhouse, E. J. C.	San Francisco, California	1865
Dubois, A. L.	Lincoln, California	1864
Duncan, S. C.	Vallejo, California	1877
Dunn, James P. H., S.B.	Berkeley, California	1888
Enright, Chas M., A.B.	Santa Clara, California	1884
Estes, Melvin B.	San Francisco, California	1888
Evans, C. W.	Modesto, California	1881
Fenn, C. N.	San Francisco, California	1885
Fine, Andrew	San Jose, California	1866
Foote, Gilbert	Lakeford, California	1879
Foreman, Francesca I.	San Francisco, California	1889
Fottrell, Michael J.	San Francisco, California	1887
Foulkes, J. F., Jr.	Oakland, California	1880
Frick, Euclid B.	Philadelphia, Pennsylvania	1888
Frost, Joseph	Vallejo, California	1877
Gale, Herbert A.	Sacramento, California	1879
Gallwey, John	San Francisco, California	1885
Gates, Frank H.	San Francisco, California	1884
Gilham, G. W.	Oakland, Oregon	1881
Glaze, George I.	Saratoga, Kansas	1887
Gleaves, Christopher C.	Anderson, California	1889
Grattan, E. L.	San Francisco, California	1881
Gros, Edward	San Francisco, California	1865
Guilemard, A. J.	San Francisco, California	1878
Hackett, John	San Francisco, California	1867
Haile, C. S.	Alameda, California	1869
Hampton, James E.	San Francisco, California	1871
Handy, J. C.	San Francisco, California	1864
Hansen, Thomas C.	San Francisco, California	1867
Happersberger, Albert K., A.B.	San Francisco, California	1888
Harmon, R.	Oakland, Oregon	1879
Harris, Thomas W.	Russellville, Indiana	1875

Haskin, Wm. H.	San Francisco, California	1889
Heavitt, Granville	San Francisco, California	1866
Heinimann, J. M.	San Francisco, California	1877
Hicks, Young E.	Merced, California	1874
Hodgdon, W. H. A.	San Francisco, California	1876
Holmes, Edw. R.	Walla Walla, Washington	1889
Hook, Walter E.	Walnut Creek, California	1876
Hopkins, T. P.	San Francisco, California	1880
Howard, Katherine I.	San Francisco, California	1885
Howard, Wm. B.	Modesto, California	1887
Howell, H. H.	Knight's Ferry, California	1879
Hughes, Jerome A.	San Francisco, California	1883
Hughes, L. J.	San Francisco, California	1879
Johnstone, A.	San Francisco, California	1879
Jones, Ottowell W.	San Francisco, California	1889
Joseph, Simon E.	East Portland, Oregon	1877
Kawakami, Masayasu	Japan	1889
Keane, George B.	San Francisco, California	1872
Kelly, John L.	Lewiston, Idaho Territory	1888
Kingsley, Thomas H.	San Francisco, California	1886
Kirchhoffer, Frederick	San Francisco, California	1887
Kirkpatrick, C. A.	Redwood City, California	1871
Kirkwood, J. W.	Salem, Oregon	1876
Kobayashi, Sankio	Japan	1887
Kosbue, A. Emil	Hamburg, Germany	1875
Kurtz, Joseph	Los Angeles, California	1875
Laidlaw, Horace	Oakland, California	1880
Le Fevre, J. P.	Plumas County, California	1881
Lewitt, F. A.	San Francisco, California	1878
Lindenberger, W. H.	Bartlett Springs, California	1876
Lingo, Marin B.	Salem, Oregon	1866
Lonigo, Emile V.	San Francisco, California	1883
Lord, Franklin F.	San Francisco, California	1880
Lovett, Wm. B.	Oakland, California	1883
Lundborg, Gustaf W.	San Francisco, California	1883
Lustig, Daniel D., Ph.G.	San Francisco, California	1885
Lyford, L. Dexter	San Francisco, California	1872
Mackenzie, J. H.	Edinburg, Scotland	1870
Martineaut, E. D.	San Francisco, California	1873
Marx, Frances R.	San Francisco, California	1889
Mason, Benjamin F.	San Francisco, California	1875
Mather, Squire R.	Kelseyville, California	1889
Matthewson, J. M.	San Francisco, California	1882
Mayer, Oscar J., Ph.G.	San Francisco, California	1889
Mays, Arthur H.	Stockton, California	1887
Mays, Wm. H.	San Francisco, California	1873
McColl, G. F.	East Portland, Oregon	1877
McCormack, Herbert F., A.B.	St. Helena, California	1876
McCoy, Juan W.	Bell's Ridge, California	1884
McDermott, Wm. P.	San Francisco, California	1874

McDonald, J. J.	San Francisco, California	1877
McGuire, Lucius	San Francisco, California	1868
McLaughlin, M. A.	San Francisco, California	1878
McLean, John T.	Modesto, California	1887
McLean, Robert A.	Modesto, California	1874
Mervy, Emile C.	San Francisco, California	1883
Merritt, T. W.	San Francisco, California	1882
Meyers, R. C.	San Francisco, California	1880
Miller, Chas. F.	San Francisco, California	1874
Miller, John A.	San Francisco, California	1875
Minor, John F.	San Francisco, California	1876
Moody, Mary F.	San Francisco, California	1882
Morgan, F. E.	Santa Cruz, California	1881
Morrill, Augustus L.	Colima, Mexico	1887
Mueller, H. E.	Brooklyn, California	1880
Muenter, Henry	Stockton, California	1882
Newmark, Valentine	San Francisco, California	1868
Nichols, Theodore A.	Mission San Jose, California	1885
Noble, John A.	St. Johns, Canada	1888
Nottage, George E.	Stockton, California	1874
Nuttall, George H. F.	San Francisco, California	1884
O'Brien, Aloysius P.	Port Townsend, Washington	1889
Olds, Wm. H.	San Francisco, California	1881
Oliver, Joseph A.	San Francisco, California	1889
O'Neill, A. A.	San Francisco, California	1867
O'Neill, J. C.	Vallejo, California	1873
Oster, Chas.	Oakland, Oregon	1878
Park, Theorilda C.	San Francisco, California	1887
Partsch, Herman	San Francisco, California	1884
Paton, Chas. J.	San Francisco, California	1883
Patterson, T. J.	Visalia, California	1882
Payne, J. R.	San Francisco, California	1882
Perrault, Edward L.	San Francisco, California	1885
Pescia, Joseph	San Francisco, California	1877
Plant, Benj. A.	Sacramento, California	1886
Plummer, Richard H.	Yolo, California	1866
Pond, Henry M.	San Francisco, California	1880
Pond, W. B.	San Francisco, California	1864
Pope, Horace E.	San Francisco, California	1876
Powell, J. M.	Mammoth, Oregon	1876
Pressley, J. B.	Santa Rosa, California	1882
Prevost, J. Renny	San Jose, California	1866
Pruett, J. A.	Pendleton, Oregon	1878
Quinlan, Albert P.	San Francisco, California	1876
Reardon, T. B.	Oroville, California	1882
Reardon, Wm. E.	San Francisco, California	1887
Reed, Clarence E.	Placerville, California	1883
Reich, George A.	San Francisco, California	1877
Reynolds, George E.	San Francisco, California	1877
Richardson, J. A.	Amity, Oregon	1866



Riley, J. S.	Vallejo, California	1883
Robertson, John W.	San Francisco, California	1880
Robinson, Luke.	Petaluma, California	1867
Rorke, James.	San Francisco, California	1876
Rucker, H. N.	Santa Clara, California	1870
Rupe, Samuel H.	Healdsburg, California	1866
Sabey, L. A.	San Francisco, California	1880
Sage, H. T.	San Francisco, California	1870
Sawyer, H. C.	San Francisco, California	1881
Schellhous, E. J.	Huron County, Ohio	1875
Schnabel, Martin	Newcastle.	1873
Scholl, Albert L., Ph.G.	San Francisco, California	1884
Scott, Arthur W.	San Francisco, California	1879
Seavey, L. T.	Port Townsend, W. T.	1878
Seawell, John L.	Healdsburg, California	1870
Seawell, Thomas H.	Healdsburg, California	1876
Sellon, Anna F.	San Francisco, California	1881
Senter, E. S.	San Jose, California	1882
Shannon, James	San Francisco, California	1887
Sheets, John H.	Phoenix, Arizona Territory	1881
Shelton, Thos. W.	Salem, Oregon	1867
Sherman, Elenora S.	San Francisco, California	1884
Shuey, Sarah I.	East Oakland, California	1878
Sichel, Gust. W.	San Francisco, California	1876
Simon, Jules A.	Paris, France	1875
Soboslay, Julius	San Francisco, California	1886
Smith, George S.	San Francisco, California	1879
Smith, T. H.	Eureka, California	1876
Smith, William P.	Salem, Oregon	1875
Sparkes, Agnes	San Francisco, California	1879
Stanton, James	San Francisco, California	1882
Steely, John	Kirbyville, Oregon	1867
Stevenson, J. R.	San Francisco, California	1877
Stewart, J. M.	San Francisco, California	1882
Stivers, C. A.	San Francisco, California	1864
Summers, G. M.	Sonora, California	1876
Summers, John F.	San Francisco, California	1878
Sutro, Emma L.	San Francisco, California	1881
Swann, Charles M.	San Francisco, California	1875
Swisher, J. R.	Danville, Illinois	1877
Tartar, A. P.	Tehama, California	1882
Taylor, Edward R.	San Francisco, California	1865
Tevis, Henry L.	San Francisco, California	1887
Toland, Charles A.	San Francisco, California	1869
Tuggle, Samuel P.	Memphis, Tennessee	1889
Turner, J. T.	Mariposa, California	1869
Tuttle, H. P.	Castroville, California	1869
Urban, Kurt	San Francisco, California	1883
Voigt, W. C.	San Francisco, California	1879
Von Buelo, F.	San Francisco, California	1877

Wade, Mark S.....	San Francisco, California.....	1889
Walz, G.....	San Francisco, California.....	1868
Wanzer, L. M. F.....	San Francisco, California.....	1876
Watanabe, Tey.....	Japan.....	1887
Waters, John W.....	Carson City, Nevada.....	1874
Webber, J. S.....	Sierra County, California.....	1869
Weeks, F. L.....	San Francisco, California.....	1864
Wheaton, S. P.....	Oakland, California.....	1877
Whittell, A. P.....	San Francisco, California.....	1873
Weiss, E. M.....	San Francisco, California.....	1877
Welch, W. P.....	San Francisco, California.....	1864
White, James T.....	Oakland, California.....	1888
Wickman, Wm. J.....	San Francisco, California.....	1883
Widney, J. P.....	Santa Clara, California.....	1867
Wilcox, Wilber J.....	Oakland, California.....	1885
Williams, Robert B.....	San Francisco, California.....	1887
Williamson, John M.....	Vallejo, California.....	1885
Williamson, W. T.....	East Portland, Oregon.....	1877
Wilson, Kemlo R. McD.....	San Francisco, California.....	1886
Winton, Henry N.....	Haywards, California.....	1885
Woods, W. E. Josephine.....	San Francisco, California.....	1885
Wooster, David.....	San Francisco, California.....	1885
Young, Junius D.....	Stockton, California.....	1881
Younger, Alex. J.....	San Francisco, California.....	1869
Younger, Edward A.....	San Francisco, California.....	1879
Zeyn, Gustav C.....	Anaheim, California.....	1889
Total.....		273

## THE ALUMNI ASSOCIATION.

The Alumni Association of the Medical Department of the University of California now includes in its membership most of the graduates of the institution, and the officers for the ensuing year take pleasure in announcing a prosperous outlook for the Association.

The objects of the Society are the promotion of the prosperity of our *Alma Mater*, the maintenance and cultivation of fraternal feeling among the Alumni, and the advancement of the interest of medical education and the diffusion of scientific knowledge.

Any alumnus of the Medical Department of the University, in good professional standing, is eligible to membership upon the payment of the initiation fee of five dollars, which entitles the applicant to a certificate of membership, signed by the President, Vice-President, Secretary and Executive Committee.

A life membership and certificate may be obtained by any eligible alumnus upon the payment of twenty dollars.



The Professors and Teachers in the Medical Department are entitled to honorary membership with an appropriate certificate.

The meetings during 1890 will be held monthly, at the offices of the members residing in San Francisco, and the annual meeting will be held in a public hall the early part of November. At these meetings, medical and scientific topics will be brought up for discussion, and all present asked to participate.

Papers and reports of special cases are solicited from members outside of the city or abroad.

The annual banquet will be given the evening following the commencement exercises of the College.

The following officers have been elected for 1890:

L. M. F. WANZER, M. D., President.  
FRANCOIS DELMONT, M. D., Vice-President.  
JULES SIMON, M. D., Secretary.  
K. I. HOWARD, M. D., Treasurer.

*Executive Committee.*

JAMES W. BLAKE, M. D.  
JULES SIMON, M. D.  
M. W. MOODY, M. D.

All alumni are cordially invited to identify themselves with the Association and assist in the promotion of its welfare.

For further particulars address the Secretary of the Association—

JULES SIMON, M. D.,  
No. 329 Geary Street,  
San Francisco, Cal.

# UNIVERSITY OF CALIFORNIA.

## ACADEMIC SENATE.

NOTE.—The faculties of the University, together with the Instructors, constitute by law the Academic Senate.

The names, excepting those of the President and Secretary, are arranged in the order of original accession to membership in the Academic Senate.

HORACE DAVIS, A.B., PRESIDENT.....Berkeley.  
*President of the University.*

JOHN HARMON C. BONTÉ, D.D., SECRETARY.....Dwight Way,  
near Choate Street, Berkeley.  
*Professor of Legal Ethics.*

JOHN LeCONTE, M.D., LL.D.\*.....Corner Market Street and  
Dwight Way, Berkeley.  
*Professor of Physics.*

MARTIN KELLOGG, A.M.\* Bushnell St. near College Way, Berkeley.  
*Professor of the Latin Language and Literature.*

JOSEPH LeCONTE, M.D., LL.D....Bancroft Way, near Piedmont  
Avenue, Berkeley.  
*Professor of Geology and Natural History.*

FRANK SOULÉ, GRAD. U. S. MILITARY ACADEMY, WEST POINT..960 Oak  
Street, Oakland.  
*Professor of Civil Engineering and Astronomy.*

STEPHEN JOHNSON FIELD, LL.D. ....Washington, D. C., and  
San Francisco.  
*Honorary Professor of Law.*

WILLARD BRADLEY RISING, M.E., PH.D....Corner Chapel Street  
and Allston Way, Berkeley.  
*Professor of Chemistry.*

GEORGE WOODBURY BUNNELL, A.M....1955 Telegraph Avenue,  
Oakland.  
*Professor of the Greek Language and Literature.*

GEORGE DAVIDSON, PH.D., D.Sc....43½ Appraiser's Building, San  
Francisco.  
*Honorary Professor of Geodesy and Astronomy.*

RICHARD BEVERLY COLE, A.M., M.D., M.R.C.S., Eng. ..218 Post  
Street, San Francisco.  
*Professor of Obstetrics and Gynecology.*

MELANCTHON WILLIAMS FISH, M.D..461 East Fourteenth Street,  
Oakland.  
*Emeritus Professor of Physiology and Microscopy.*

GEORGE CUNNINGHAM EDWARDS, PH.B...1568 Webster Street.  
Oakland.  
*Associate Professor of Mathematics.*

---

\* Absent on Leave.

- ALBIN PUTZKER. . Corner Humboldt Ave. and Parker St., Berkeley.  
*Associate Professor of the German Language and Literature.*
- EUGENE WOLDEMAR HILGARD, PH.D., LL.D. . . . . Bancroft Way,  
near Audubon Street, Berkeley.  
*Professor of Agriculture, Agricultural Chemistry, General and Economic Botany.*
- SAMUEL BENEDICT CHRISTY, PH. B. . . . Piedmont Avenue, near  
Bancroft Way, Berkeley.  
*Associate Professor of Mining and Metallurgy.*
- FREDERICK SLATE, B.S.\* . . . . Audubon Street, near Bancroft Way,  
Berkeley.  
*Associate Professor of Physics and Mechanics.*
- FREDERICK GODFREY HESSE . . . . Corner Broadway and Telegraph  
Avenue, Oakland.  
*Professor of Mechanical Engineering.*
- BERNARD MOSES, PH. D. . . Audubon Street, near University Grounds,  
Berkeley.  
*Professor of History and Political Economy.*
- ABRAHAM WENDELL JACKSON, JR., PH. B. . . . Fourth University  
Cottage, Berkeley.  
*Associate Professor of Mineralogy, Petrography, and Economic Geology.*
- JOHN BERNARD CLARKE, PH. B. . . . 318 East Seventeenth Street,  
Oakland.  
*Associate Professor of Mathematics.*
- WILLIAM CAREY JONES, A.M. . . . Bancroft Way, near Dana Street,  
Berkeley.  
*Associate Professor of United States History.*
- WILLIAM THEODORE WENZELL, M.D., PHARM. M. . . . 153 Grove  
Street, San Francisco.  
*Professor of Chemistry in the College of Pharmacy.*
- ROBERT ARMISTEAD McLEAN, M.D. . . . . 603 Merchant Street, San  
Francisco.  
*Professor of Clinical and Operative Surgery; Dean of the Medical Faculty.*
- GEORGE AUGUSTUS SHURTLEFF, M.D. . . . . Stockton.  
*Emeritus Professor of Mental Diseases and Medical Jurisprudence.*
- WILLIAM FLETCHER McNUTT, M.D., M.R.C.S. AND L.R.C.P., EDIN.  
405 Montgomery Street, San Francisco.  
*Professor of the Principles and Practice of Medicine.*
- SERRANNO CLINTON HASTINGS, LL.D. . . . . 636 Clay Street, San  
Francisco.  
*Professor of Comparative Jurisprudence.*
- EDMOND O'NEILL, PH.B. . . . . 1403 Chesnut Street, Oakland.  
*Instructor in Chemistry.*
- EDWARD JAMES WICKSON, A.M. . . . . Corner Bancroft Way and  
Audubon Street, Berkeley.  
*Lecturer on Practical Agriculture, and Assistant Superintendent of the  
Experimental Grounds.*

---

\* In charge of the Department of Physics in the absence of Professor LECONTE.

- HANS HERMAN BEHR, M.D. . . . 509 Kearny Street, San Francisco.  
*Professor of Botany in the College of Pharmacy.*
- EDWARD WHELOCK RUNYON, PH.G. . . . 53 Stevenson Street,  
 San Francisco.  
*Professor of the Theory and Practice of Pharmacy, and Dean of the  
 Pharmaceutical Faculty.*
- WILLIAM MARTIN SEARBY. . . . 859 Market Street, San Francisco.  
*Professor of Materia Medica in the College of Pharmacy.*
- WILLIAM HENRY MAYS, M.D. . . . 329 Geary Street, San Francisco.  
*Professor of Mental Diseases and Medical Jurisprudence.*
- WILLIAM EDWIN TAYLOR, M.D. . . 215 Geary Street, San Francisco.  
*Professor of the Principles and Practice of Surgery.*
- CLARK LAMOTTE GODDARD, A.M., D.D.S. . . 131 Post Street, San  
 Francisco.  
*Professor of Orthodontia and Dental Metallurgy.*
- ABRAHAM LEWIS LENGFELD, M.D., 954 Market St., San Francisco.  
*Professor of Materia Medica and Medical Chemistry.*
- IRVING STRINGHAM, PH.D. . Corner Piedmont Avenue and Bancroft  
 Way, Berkeley.  
*Professor of Mathematics, Dean of the Faculty of Letters and of the  
 Faculties of Science.*
- EDWARD LEE GREENE, PH.B. . . . University Avenue, between  
 Sherman and Grant Streets, Berkeley.  
*Lecturer on Botany.*
- CORNELIUS BEACH BRADLEY, A.M., 668 Eighteenth St., Oakland.  
*Associate Professor of the English Language and Literature.*
- WILLIAM BREAKEY LEWITT, M.D., 605 Laguna St., San Francisco.  
*Professor of Anatomy.*
- BENJAMIN RALPH SWAN, M.D. . 310 Stockton Street, San Francisco.  
*Professor of the Diseases of Children.*
- GEORGE HOLMES HOWISON, LL.D. . . . Corner Piedmont Avenue  
 and Channing Way, Berkeley.  
*Mills Professor of Intellectual and Moral Philosophy, and Civil Polity.*
- LUIS LANE DUNBAR, D.D.S. . . . 500 Sutter Street, San Francisco.  
*Professor of Operative Dentistry and Dental Histology, and  
 Dean of the Dental Faculty.*
- MAURICE JAMES SULLIVAN, D.D.S. . 30 Post Street, San Francisco.  
*Professor of Dental Pathology and Therapeutics.*
- WILLIAM GALT RAYMOND, C.E. . . . Durant Avenue, near Fremont  
 Street, Berkeley.  
*Instructor in Civil Engineering.*
- CHARLES WILLIAM SLACK, PH.B., LL.B. . . 212 Sansome Street,  
 San Francisco.  
*Professor of Municipal Law.*
- HERMANN KOWER, C.E. . . . . 906 Broadway, Oakland.  
*Instructor in Instrumental Drawing.*
- EDWARD SINGLETON HOLDEN, LL.D. . . . . Mount Hamilton.  
*Director of the Lick Observatory, and Astronomer.*



- ROBERT PAUL HASTINGS, A.B., LL.B. . . . . 120 Phelan Building,  
808 Market Street, San Francisco.  
*Dean of the Faculty of Law.*
- WASHINGTON AYER, M.D. . . . . 410 Kearny Street, San Francisco.  
*Professor of Hygiene.*
- GEORGE F. E. HARRISON (First Lieutenant Second U. S. Artillery),  
2507 Sacramento Street, San Francisco.  
*Professor of Military Science and Tactics.*
- GEORGE HERMAN POWERS, A.M., M.D. . . . . 215 Geary Street,  
San Francisco.  
*Professor of Ophthalmology and Otology.*
- JOACHIM HENRY SENGGER, PH.D. . . 2122 Steiner St., San Francisco.  
*Instructor in German and Greek.*
- WILLIAM WATT KERR, A.M., M.B., C.M. . . 522 Sutter Street, San  
Francisco.  
*Professor of Clinical Medicine.*
- FELICIEN VICTOR PAGET, BACHELIER ÈS LETTRES, BACHELIER ÈS  
SCIENCES. . . . . 813 Hyde Street, San Francisco.  
*Assistant Professor of the French and Spanish Languages.*
- ARNOLD ABRAHAM D'ANCONA, A.B., M.D. . . . 405 Montgomery  
Street, San Francisco.  
*Professor of Physiology.*
- THOMAS RUTHERFORD BACON, A.B. . . . . Corner Oxford and  
Addison Streets, Berkeley.  
*Instructor in History.*
- ELISHA WILLIAMS MCKINSTY, LL.D. . 4 Sutter St., San Francisco.  
*Professor of Municipal Law.*
- WILLIAM DALLAM ARMES, PH.B. . . . Dwight Way, near Bowditch  
Street, Berkeley.  
*Instructor in English.*
- ALBERT ANDREW HOWARD, PH.D. . . . . Chapel Street, Berkeley.  
*Ad interim Professor of the Latin Language and Literature.*
- DOUGLAS WILLIAM MONTGOMERY, M.D. . . . 1124 Sutter Street,  
San Francisco.  
*Professor of Pathology and Microscopy; Curator of the Medical Department.*
- GEORGE MOREY RICHARDSON, PH.D. . . Corner Durant Avenue  
and Dana Street, Berkeley.  
*Instructor in Latin.*
- FRANK GAYLORD HUBBARD, PH.D. . Dwight Way, near Bowditch  
Street, Berkeley.  
*Instructor in English.*
- CHARLES MILLS GAYLEY, A.B. . . . Corner Dwight Way and College  
Avenue, Berkeley.  
*Professor of the English Language and Literature.*
- CARLO VENEZIANI, PH.D. . . . . 1377 San Pablo Avenue, Oakland.  
*Temporary Instructor in Mathematics.*
- ROBERT FRANKLIN PENNELL, A.B. . 214 Castro St., San Francisco.  
*Temporarily in Charge of the Department of Greek.*

# UNIVERSITY OF CALIFORNIA.

---

## COLLEGE OF DENTISTRY,

TOLAND HALL, STOCKTON STREET, BELOW CHESTNUT, SAN FRANCISCO, CAL

---

### FACULTY.

- HORACE DAVIS, A.B., President of the University, and *ex-officio* President of the Faculty.
- JOSEPH LeCONTE, M.D., LL.D., Honorary Professor of Biology.
- C. L. GODDARD, A.M., D.D.S., Professor of Mechanical Dentistry, Dental Metallurgy and Orthodontia.
- L. L. DUNBAR, D.D.S., Dean, and Professor of Operative Dentistry and Dental Histology.
- MAURICE J. SULLIVAN, D.D.S., Professor of Dental Pathology and Therapeutics.
- W. E. TAYLOR, M.D., Professor of the Principles and Practice of Surgery.
- A. L. LENGFELD, M.D., Professor of Materia Medica and Medical Chemistry.
- WILLIAM B. LEWITT, M.D., Professor of Anatomy.
- A. A. D'ANCONA, A.B., M.D., Professor of Physiology.
- 

### LECTURERS, DEMONSTRATORS AND ASSISTANTS.

- CHARLES BOXTON, D.D.S., Lecturer on Mechanical Dentistry.
- J. L. ASAY, M.D., Lecturer on Oral Surgery.
- HARRY P. CARLTON, D.D.S., Demonstrator of Operative Dentistry.
- CHARLES BOXTON, D.D.S., Demonstrator of Mechanical Dentistry.
- M. F. GABBS, D.D.S., Demonstrator of Continuous Gum Work.
- J. T. ROWAND, D.D.S., Demonstrator of Crown and Bridge Work.
- JOHN M. WILLIAMSON, M.D., Demonstrator of Anatomy.
- WINSLOW ANDERSON, M.D., Assistant to the Chair of Materia Medica and Medical Chemistry.
- EUGENE PAYNE, D.D.S., Assistant Demonstrator of Operative Dentistry.
- EDWARD N. SHORT, D.D.S., Assistant Demonstrator of Operative Dentistry.
- S. A. HACKETT, D.D.S., Assistant Demonstrator of Mechanical Dentistry.
- EDWARD W. PRATT, D.D.S., Assistant Demonstrator of Mechanical Dentistry and Metallurgy.
- JOHN H. BARBAT, PH.G., M.D., Assistant Demonstrator of Anatomy.



CLINICAL INSTRUCTORS.

F. W. BLISS, D.D.S.	A. F. McLAIN, M.D., D.D.S.
H. C. DAVIS, D.D.S.	W. E. PRICE, D.D.S.
B. W. HAINES, M.D., D.D.S.	MAX SICHEL.
W. B. KINGSBURY.	E. L. TOWNSEND, D.D.S.
H. E. KNOX, D.D.S.	L. VAN ORDEN, M.D.
F. J. LANE, D.D.S.	WILLIAM WOOD.

---

The session of 1890 begins February 3d and ends October 31st.

---

Graduates in Medicine may apply for the Degree of Doctor of Dental Surgery, after having passed *two* full years of practical instruction or experience in Dentistry, *one* year of which, including one course of lectures, must be spent in this institution.

In accordance with a rule adopted by the National Association of Dental Faculties, requiring three years' attendance of all matriculates, to take effect in February, 1892, matriculates who are graduates in Medicine will be admitted to the second year without examination.

Graduates of the Dental Department are admitted to the Medical Department as students of the second year, without examination.

FEES.

Matriculation (paid but once).....	\$ 5 00
Tuition.....	120 00
Demonstrator of Anatomy's Fee .....	10 00
Diploma.....	30 00

For Annual Announcement, address—

L. L. DUNBAR, Dean,  
No. 500 Sutter Street, San Francisco.

# UNIVERSITY OF CALIFORNIA.

## DEPARTMENT OF PHARMACY.

---

### CALIFORNIA COLLEGE OF PHARMACY.

#### FACULTY.

HORACE DAVIS, A.B., President of University of California.  
WILLIAM T. WENZELL, M.D., PH.G., PH.M., Professor of Chemistry.  
HERMANN H. BEHR, M.D., Professor of Botany.  
WILLIAM M. SEARBY, Professor of Materia Medica.  
EDWARD W. RUNYON, PH.G., Professor of Pharmacy.

---

The Eighteenth Annual Course will begin April 2d, 1890, and continue to October 1st of the same year. Lectures will be delivered on Chemistry, Materia Medica, Botany, Theoretical and Practical Pharmacy. Arrangements have been made to provide Laboratory Instruction in Chemical and Pharmaceutical Work, and in every respect efforts will be made to keep pace with the rapid advancement of Pharmaceutical Science.

Every applicant for admission to the regular course for graduation at this College will be required to pass a preliminary examination, or to present a diploma or other satisfactory written evidence that he has passed the first grammar grade, and is entitled to enter a High School of this State, or has attended some academy of a grade equal to that of our High Schools. Those who do not present such certificates will be examined in English reading and composition, writing, geography and arithmetic.

Graduates in Pharmacy of this College are permitted to present themselves for examination for the Degree of Doctor of Medicine in the Medical Department of the University of California, after attending that school two years instead of three, as required of other students. The fees have also been reduced in like proportion to graduates in Pharmacy.

Graduates of such Medical Colleges as are recognized by the American Medical Association will be permitted to present themselves for examination for the degree of Graduate of Pharmacy after one year's attendance at this College, provided they have complied with all the other conditions for graduation.

For prospectus, etc., address—

EDWARD W. RUNYON, PH.G., *Dean*,  
53 STEVENSON STREET, SAN FRANCISCO, CAL.

# UNIVERSITY OF CALIFORNIA.

## UNDERGRADUATE DEPARTMENTS AT BERKELEY,

INCLUDING

- |   |                                       |
|---|---------------------------------------|
| 1. COLLEGE OF LETTERS.                          | 2. COLLEGE OF AGRICULTURE.            |
| (a) CLASSICAL COURSE.                           | 3. COLLEGE OF MECHANICS.              |
| (b) LITERARY COURSE.                            | 4. COLLEGE OF MINING.                 |
| (c) COURSE IN LETTERS AND<br>POLITICAL SCIENCE. | 5. COLLEGE OF CIVIL ENGI-<br>NEERING. |
| 6. COLLEGE OF CHEMISTRY.                        |                                       |

## ACADEMIC COUNCIL.

HORACE DAVIS, LL.D., President of the University, PRESIDENT.

FINLAY COOK, PH.B., Recorder of the Faculties, SECRETARY.

WILLIAM D. ARMES, PH.B., Instructor in English.

THOS. R. BACON, A.B., B.D., Instructor in History.

CORNELIUS B. BRADLEY, A.M., Associate Professor of the English Language and Literature.

GEORGE WOODBURY BUNNELL, A.M., Professor of the Greek Language and Literature.

SAMUEL B. CHRISTY, PH.B., Associate Professor of Mining and Metallurgy.

JOHN B. CLARK, PH.B., Associate Professor of Mathematics.

GEORGE DAVIDSON, PH.D., D.Sc., Honorary Professor of Geodesy and Astronomy.

GEORGE C. EDWARDS, PH.B., Associate Professor of Mathematics.

STEPHEN J. FIELD, LL.D., Honorary Professor of Law.

CHAS. M. GAYLEY, A.B., Professor of the English Language and Literature.

EDWARD L. GREENE, PH.B., Lecturer on Botany.

GEORGE F. E. HARRISON (First Lieutenant Second U. S. Artillery),  
Professor of Military Science and Tactics.

FREDERICK G. HESSE, Professor of Mechanical Engineering.

EUGENE W. HILGARD, PH.D., LL.D., Professor of Agriculture, Agricultural Chemistry, General and Economic Botany.

ALBERT A. HOWARD, PH.D., *ad interim* Professor of the Latin Language and Literature.

GEORGE H. HOWISON, LL.D., Mills Professor of Intellectual and Moral Philosophy and Civil Polity.

FRANK G. HUBBARD, PH.D., Instructor in English.

A. WENDELL JACKSON, PH.B., Associate Professor of Mineralogy, Petrography, and Economic Geology.

WILLIAM CAREY JONES, A.M., Associate Professor of United States History.

MARTIN KELLOGG, A.M.,\* Professor of the Latin Language and Literature.

HERMANN KOWER, C.E., Instructor in Instrumental Drawing.

JOHN LeCONTE, M.D., LL.D.,\* Professor of Physics.

JOSEPH LeCONTE, M.D., LL.D., Professor of Geology and Natural History.

BERNARD MOSES, PH.D., Professor of History and Political Economy.

EDMOND O'NEILL, PH.B., Instructor in Chemistry.

FELICIEN V. PAGET, B.L., B.S., Assistant Professor of the French and Spanish Languages.

ROBERT F. PENNELL, A.B., temporarily in charge of the Department of Greek.

ALBIN PUTZKER, Associate Professor of the German Language and Literature.

WILLIAM G. RAYMOND, C.E., Instructor in Civil Engineering.

GEORGE M. RICHARDSON, PH.D., Instructor in Latin.

WILLARD B. RISING, M.E., PH.D., Professor of Chemistry.

JOACHIM HENRY SENGEL, PH.D., Instructor in German and Greek.

FREDERICK SLATE, B.S.,† Associate Professor of Physics.

FRANK SOULÉ (GRADUATE U. S. MILITARY ACADEMY), Professor of Civil Engineering and Astronomy.

IRVING STRINGHAM, PH.D., Professor of Mathematics, and Dean of the College of Letters and the Colleges of Science.

CARLO VENEZIANI, PH.D., Temporary Instructor in Mathematics.

EDWARD JAMES WICKSON, A.M., Lecturer on Practical Agriculture, and Assistant Superintendent of the Experimental Grounds.

---

\* Absent on leave.

† In charge of the Department of Physics in the absence of Professor LeCONTE.

---

## ORGANIZATION OF INSTRUCTION.

### GRADUATE COURSES.

To Graduates of the University of California, or of other institutions of equal grade, who may wish to pursue advanced work, general or special, every facility is extended that the libraries, laboratories and collections of the University afford; and, so far as is possible, courses of study will be framed to meet the requirements of such students. These courses may be so constituted as to lead, respectively, to the degree of Master of Arts, Master of Letters, Master of Science, or Doctor of Philosophy; or to the professional degree of Mechanical Engineer, Mining Engineer, Metallurgical Engineer or Civil Engineer.

### UNDERGRADUATE COURSES.

*Eight Regular Courses* of study are at present established, leading directly to corresponding degrees, namely:

In charge of the Faculty of the College of Letters:

- I. The *Classical Course*, leading to the degree of A. B.;
- II. The *Literary Course*, leading to the degree of B. L.;
- III. The *Course in Letters and Political Science*, leading to the degree of Ph. B.

In charge, severally, of the respective Faculties of the five Colleges of Science:

- IV. The *Course in Agriculture*;
- V. The *Course in Mechanics*;
- VI. The *Course in Mining*;
- VII. The *Course in Civil Engineering*;
- VIII. The *Course in Chemistry*;

Each of which leads regularly to the degree of B. S.

To each of these Regular Courses there pertains an established curriculum of studies, prescribed and elective, arranged in the order of four successive years.

There are permitted, in addition, *Courses at Large* and *Partial Courses*, not leading directly to any degree, but through each of which some one of the above-named degrees is possibly attainable.

---

## CONDITIONS OF ADMISSION.

### GENERAL LIST OF PREPARATORY SUBJECTS.

Applicants for admission to undergraduate courses must be at least sixteen years of age, must deposit with the Recorder a certificate of good moral character, and must pass a satisfactory examination in such of the following subjects as are designated below for the course and status sought:

**1. English.** A short composition, correct in spelling, punctuation, paragraphing and grammar, upon a subject announced at the time of the examination, and taken, until further notice, from the following works: Tom Brown's *School Days at Rugby*; Scott's *Lady of the Lake*; Irving's *Alhambra*; Thackeray's *Newcomes*; Shakespeare's *Merchant of Venice*; and Julius Caesar (Rolfe's, or the Clarendon Press edition). In 1891, and thereafter until further notice, Plutarch's *Lives* (Ginn's selection) will take the place of Tom Brown's *School Days* in the above requirement. In 1890, either Plutarch or Tom Brown will be accepted.

Applicants will also be required to analyze sentences from these works, and to pass an examination on the first seventy-one lessons in Kellogg's *Text-book on Rhetoric*.

**2. Arithmetic.** Including the metric system. The technical parts of Commercial Arithmetic, viz., banking, profit and loss, commission, taxes, duties, stocks, insurance, exchange and average of payments, are not insisted on.



**3. Algebra.** (a) To Quadratic Equations; including the various methods of factoring, the theory of exponents, integral and fractional, positive and negative, and the calculus of radicals.

(b) Quadratic Equations, both single and simultaneous, their solution and their theory; including all the recognized methods of solution and all equations reducible to the quadratic form; formation of equations from given roots.

**4. Plane Geometry.** (a) All of Plane Geometry except the metrical properties of regular polygons and the measurement of the circle.

(b) The general properties of regular polygons, their construction, perimeters and areas; and the measurement of the circle, including the different methods for the determination of the ratio of the circumference to the diameter.

**5. History and Geography.** History of the United States and the general facts of Physical and Political Geography. Barnes' Brief History of the United States, and the geographies used in the first grade grammar schools, will serve to indicate the amount of knowledge expected.

**6. Latin.** Caesar, Gallic War, Books I.-IV. (or Civil War, Books I., II.); Cicero, the Four Catilinarian Orations. With questions, in both cases, on the implied grammar, and on the subject-matter, and the corresponding archæology. Translation into Latin of simple English sentences.

**7. Latin.** Cicero, the orations *Pro Archia Poeta* and *Pro Lege Manilia*; Virgil, *Æneid*, Books I.-VI. With questions, in both cases, on the implied grammar, on the subject-matter, and the corresponding archæology, and, in the case of Virgil, on the prosody. Sight translation of easy Latin prose. Translation into Latin of brief connected narratives.

**8. Greek.** Xenophon, *Anabasis*, Book I. With questions on the subject-matter, archæology and grammar (with special reference to etymology). White's First Lessons in Greek, lessons I.-IX. Translation into Greek of simple English sentences.

**9. Greek.** Xenophon, *Anabasis*, Books II.-IV., or Goodwin's Greek Reader, pp. 37-111; Homer, *Iliad*, Books I., II., omitting the catalogue of ships. With questions on the grammar (with special reference to etymology), subject matter, archæology, and prosody. Jones' Greek Prose Composition, or its equivalent. Sight translation of easy Greek prose.

**10. Ancient History and Geography.** (a) Greek History to the death of Alexander, with the connected Geography.

(b) Roman History to the death of Commodus, with the connected Geography.

Smith's Smaller History of Greece, and Smith's Smaller (or Leighton's) History of Rome will serve to indicate the amount required.

**11. Physics.** The elements of the subject, taught experimentally, as shown in some such work as Gage's Elements of Physics; Peck's Ganot (or a real equivalent) will cover the ground.

12. Any one of the following:

(a) **Chemistry.** The elements of Chemistry (Eliot and Storer's Chemistry, Avery's Elementary Chemistry, or a thorough acquaintance with Meads' Chemical Primer). An examination in more advanced Chemistry will be given to any who wish it, and candidates who pass it will be admitted to the chemical laboratory.

Applicants who pass in Chemistry with honors will be put in an advanced division.

(b) **Botany.** The elements of Botany. An accurate knowledge of Part I. of Gray's *How Plants Grow*, together with an acquaintance with the more prominent native or cultivated plants, their structure and botanical affinities.

(c) **Physiology.** The elements of Physiology (Hutchison's or an equivalent).

(d) **Mineralogy.** The elements of Mineralogy. A good knowledge of the physical properties of minerals in general. Ability to determine by their physical properties alone twenty-five of the commonest minerals, and to give the reasons for the determination. First seventy-two pages of Nicol's *Manual of Mineralogy*; or first seventy-five pages of Dana's, third edition.

(e) **Plane Trigonometry.** The development of the general formulas of Plane Trigonometry, solution of plane triangles, and practice in the use of logarithmic tables, including four-place tables. Four-place tables only will be used in the examination.

(f) **Free-hand Drawing.** Line drawing from models, copying of patterns, etc. Particular attention is given to correctness of form and smoothness of outline. The endeavor will be to test the applicant in that free-hand use of the pencil which will be of most immediate value to him in pursuing the subject of mechanical drawing and mapping.

13. **History.** History of England and the English People, by G. W. Cox, will indicate the amount. General History will be accepted instead, in unusual cases.

14. **English.** The examination in this subject will presuppose thorough study of the selections named below. The applicant should be prepared to elucidate in full the meaning of any passage in the work assigned; to paraphrase such passage; to point out the rhetorical figures in it; to answer questions concerning the lives of the authors and the subject-matter and structure of the works studied. The history of words should also receive attention, Skeat's *Etymological Dictionary* being taken as the authority. For the present the examination in word-derivation will be limited to Spenser's *Prothalamion*.

Until 1891 the examination will be upon the following works: Scott's *Lay of the Last Minstrel*; Whittier's *Snow-Bound*; Longfellow's *Evangeline*; Lowell's *Sir Launfal*; Sir Roger de Coverley; Burke's *Works*, edited by Payne, Vol. I.; and Hales' *Longer English Poems*, omitting Wordsworth's *Laodamia* and Shelley's *Adonais*.

In 1891, and afterwards until further notice, Milton's *Comus* (Clarendon Press, or Clark and Maynard) will take the place of the following

FEB 26 1931

UNIVERSITY OF CALIFORNIA

selections in Hales' Longer English Poems: Dryden's Mac Flecknoe, Johnson's London and the Vanity of Human Wishes, and Scott's Cad-yow Castle. In 1890, either Comus or the selections mentioned in Hales will be accepted.

The examination will extend over two periods of an hour and a half each. Signal failure in this examination alone will subject the applicant to exclusion from the Course in Letters and Political Science.

#### GROUPS OF SUBJECTS FOR THE SEVERAL COURSES.

Of the foregoing subjects, one of the following three groups, or parts of them, must be taken, according to the course or status applied for:

- I. For the **Classical Course**, Subjects 1, 2, 3a, 4a, 5, 6, 7, 8, 9 and 10.
- II. For the **Literary Course**, Subjects 1, 2, 3a, 4a, 5, 6, 7, 10, 13 and 14.
- III. For any of the five **Courses in Science**, Subjects 1, 2, 3 (a and b), 4 (a and b), 5, 11, 12, and either 6 or 14.

For the **Course in Letters and Political Science**, either of the three preceding groups. A signal failure in Subject 14 will exclude the applicant from this course.

For a **Course at Large**, either of the three groups required for admission to a regular course, as the applicant may elect. And in case the applicant proposes, if admitted, to take any study out of the prescribed order, all the examinations required for its pursuit by a regular student must be passed before admission.

For a **Special Course**, such of the general list of subjects as, in the judgment of the professors or instructors in charge of the special line of studies intended, are requisite for its proper pursuit. The list thus approved must be deposited with the Recorder before the examination. No applicant who has failed in the entrance examination for a regular course or a course at large will be allowed to take a special course.

For a **Limited Course**, Subjects 1, 2, 3a, 4a and 5; and, in addition, any in the general list that are requisite to the studies sought by the applicant; if advanced studies are sought, the applicant must pass all the examinations conditional to them that are required of regular students. The exact list of requisite subjects must be ascertained through the Recorder, and deposited with him before the examination.

#### TIMES AND PLACES OF EXAMINATION.

In 1890 the first entrance examination will be held at Berkeley, also at Los Angeles, Grass Valley, Chico and Visalia, on Thursday, Friday, and Saturday, June 26, 27, and 28; the second at Berkeley only, on Tuesday, Wednesday, and Thursday, September 16, 17, and 18. Applicants must be present all three days.

---

*More detailed information concerning the foregoing matters, and concerning the College of Letters and the Colleges of Science in general, is contained in the Admission Circular (Bulletin No. 6) and the University Register, either of which will be sent to any address on application to the Recorder of the Faculties, Berkeley, California.*







C  
C12uZm  
1890/91

ANNOUNCEMENT  
OF THE  
TWENTY-EIGHTH ANNUAL  
COURSE OF LECTURES  
OF THE  
Medical Department,  
UNIVERSITY OF CALIFORNIA,  
WITH  
CATALOGUE  
OF  
STUDENTS AND GRADUATES.  
1891.

THE LIBRARY OF THE  
FEB 26 1931  
UNIVERSITY OF CALIFORNIA

---

Alumni of the Medical Department of the University,  
and others desiring to receive the ANNOUNCEMENT regularly, are requested  
to send their names and addresses to the Dean.

---

SAN FRANCISCO:  
P. M. DIERS & CO., PRINTERS.  
1891.



ANNOUNCEMENT

OF THE

TWENTY-EIGHTH ANNUAL

THE LIBRARY OF THE  
FEB 26 1931  
UNIVERSITY OF ILLINOIS

# COURSE OF LECTURES

OF THE

Medical Department,

UNIVERSITY OF CALIFORNIA,

WITH

CATALOGUE

OF

STUDENTS AND GRADUATES.

1891.

---

Alumni of the Medical Department of the University,  
and others desiring to receive the ANNOUNCEMENT regularly, are requested  
to send their names and addresses to the Dean.

---

SAN FRANCISCO:  
P. M. DIERS & Co., PRINTERS.

1891.

# UNIVERSITY OF CALIFORNIA.

## BOARD OF REGENTS.

### EX-OFFICIO REGENTS.

HIS EXCELLENCY ROBERT W. WATERMAN.....	SACRAMENTO
<i>Governor, ex-officio President of the Board.</i>	
HIS HONOR STEPHEN M. WHITE.....	LOS ANGELES
<i>Lieutenant-Governor.</i>	
HON. ROBERT HOWE .....	SONOMA
<i>Speaker of the Assembly.</i>	
HON. IRA GUSTAVUS HOITT, A.M.....	SACRAMENTO
<i>State Superintendent of Public Instruction.</i>	
HON. CHRISTOPHER GREEN.....	SACRAMENTO
<i>President of the State Agricultural Society.</i>	
DAVID KERR, Esq.....	47-49 Peale Street, SAN FRANCISCO
<i>President of the Mechanics' Institute.</i>	
.....	
<i>President of the University.</i>	

### APPOINTED REGENTS.

NAME.	ADDRESS.	TERM EXPIRES
REV. HORATIO STEBBINS, D.D.,	1609 Larkin St., S. F.	- 1894
LOUIS SLOSS, JR., ESQ.,	310 Sansome St., S. F.	- 1894
HON. J. WEST MARTIN,	Union Bank, Oakland,	- 1898
ANDREW S. HALLIDIE, ESQ.,	9 Fremont St., S. F.	- 1892
HON. WILLIAM T. WALLACE,	799 Van Ness Ave., S. F.	1902
JOHN LYMAN BEARD, A.M.,	Warm Springs, Alameda County, - - - -	- 1892
HON. TIMOTHY GUY PHELPS,	Custom House, S. F.	- 1896
ISAIAS WILLIAM HELLMAN, ESQ.,	Nevada Bank, S. F.	- 1902
GEORGE THOMAS MARYE, JR., LL.B.,	234 Montgomery St., S.F.	1898
ARTHUR RODGERS, B.S., Ph.B.,	309 Montgomery St., S.F.	1906
GEORGE JENNINGS AINSWORTH, Ph.B.,	Redondo, - - - -	- 1900
DELPHIN MICHAEL DELMAS, A.M., LL.B.,	310 Pine St., S. F.	- 1900
ALBERT MILLER, ESQ.,	132 California St., S. F.	- 1906
COLUMBUS BARTLETT, ESQ.,	12 Montgomery St., S. F.	1896
CHARLES FREDERICK CROCKER, ESQ.,	Cor. Fourth and Towns- end Sts., S. F. - - -	- 1904
JAMES FRANKLIN HOUGHTON, C.E.,	216 Sansome St., S. F.	- 1904

Regular meetings of the Board of Regents are held thirteen times a year, viz.: on the second Tuesday in each month, and on the Tuesday preceding the last Wednesday in June.

# UNIVERSITY OF CALIFORNIA.

## MEDICAL DEPARTMENT.

### FACULTY.

MARTIN KELLOGG, A.M., President *pro tem.* of the Academic Senate.

G. A. SHURTLEFF, M.D., Emeritus Professor of Mental Diseases and Medical Jurisprudence.

M. W. FISH, M.D., Emeritus Professor of Physiology and Microscopy.

R. BEVERLY COLE, A. M., M. D., M. R. C. S., Eng., Professor of Obstetrics and Gynecology.

W. F. McNUTT, M.D., M.R.C.P., Edin., etc., Professor of Principles and Practice of Medicine.

ROBERT A. McLEAN, M.D., Professor of Clinical and Operative Surgery, Dean.

W. E. TAYLOR, M.D., Professor of Principles and Practice of Surgery.

A. L. LENGFELD, M.D., Professor of Materia Medica and Medical Chemistry.

BENJ. R. SWAN, M.D., Professor of Diseases of Children.

WASHINGTON AYER, M.D., Professor of Hygiene.

GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology and Otology.

WM. WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.

ARNOLD A. D'ANCONA, A.B., M.D., Professor of Physiology.

DOUGLAS W. MONTGOMERY, M.D., Professor of Pathology and Histology.

WASHINGTON DODGE, M.D., Professor of Therapeutics.

JOHN M. WILLIAMSON, M.D., Professor of Anatomy.

JOHN W. ROBERTSON, A.B., M.D., Lecturer on Mental Diseases and Medical Jurisprudence.

FELIX LENGFELD, Ph.G., Ph.D., Lecturer on Chemistry.

JOHN H. BARBAT, Ph.G., M.D., Demonstrator of Anatomy.

H. N. WINTON, M.D., Assistant to the Chair of Materia Medica and Medical Chemistry.

C. A. VON HOFFMAN, M.D., Assistant to the Chair of Obstetrics and Gynecology.

SAM. P. TUGGLE, M.D., Assistant Demonstrator of Anatomy.

### College Dispensary Staff.

WM. H. MAYS, M.D.      WASHINGTON DODGE, M.D.

D. W. MONTGOMERY, M.D.

ROBERT A. McLEAN, M. D., Dean,  
603 Merchant Street, corner of Montgomery,  
San Francisco, Cal.



## CALENDAR.

---

THE PRELIMINARY TERM of 1891 will open on Monday, March 2d, and close on Saturday, May 9th.

THE REGULAR TERM will open on Monday, June 1st, and close on Saturday, October 31st.

THE MATRICULATION EXAMINATIONS will be held at the College building on March 2d and June 1st.

THE DIDACTIC LECTURES are delivered at the College building (Toland Hall), Stockton street, below Chestnut, San Francisco.

THE CLINICAL LECTURES are delivered at the City and County Hospital, Twenty-second street and Potrero avenue.

THE ANNUAL COMMENCEMENT for conferring the degree of Doctor of Medicine will be held early in November, in San Francisco.

## TWENTY-EIGHTH ANNUAL COURSE OF INSTRUCTION.

SESSION OF 1891.

The Medical Department of the University of California was organized in 1872, as an integral part of the State's Educational center. It was among the first to adopt the higher standard of Medical Education; having, as early as 1875, instituted a three years' course and graded studies, and in 1885 an examination for admission to the College.

The changes introduced into the curriculum of this school, and now in force, may be summarized as follows:

1. *Increase of the time of study to three years.* Three regular courses of lectures of five months each, attended through three several years, are required before the student can present himself for graduation. Students are also required to attend the clinics regularly throughout the term, and senior students to attend the preliminary term.

2. *Yearly examinations.* At the beginning of each session, examinations are held to determine the progress of the student during the year past, his advancement depending on the result of such examinations.

3. *Graded Studies.* By this arrangement the student is thoroughly drilled in the elementary subjects before proceeding higher. He is, however, expected to attend all the lectures, giving most of his hours of study to the subjects allotted to his own year.

The following are the subjects apportioned to each year's studies:

*First Year.* Anatomy, Physiology, Histology and Microscopy, Materia Medica and Medical Chemistry, Pharmacy, Dissections, Dispensary and Laboratory Work. Final examinations at the end of the first year in Pharmacy and Laboratory Work.

*Second Year.* Anatomy, Physiology, Materia Medica and Medical Chemistry, Principles and Practice of Medicine, Principles and Practice of Surgery, Therapeutics, Histology and Pathology, Obstetrics, Clinical Medicine, Clinical Surgery, Hygiene, Dissections, Dispensary Clinics. Final examinations at the end of the second year in Physiology, Materia Medica and Medical Chemistry, Histology and Hygiene.

*Third Year.* Principles and Practice of Medicine, Principles and Practice of Surgery, Obstetrics and Gynecology, Therapeutics, Clinical Medicine and Pathology, Clinical Surgery, Mental Diseases and Medical Jurisprudence, Diseases of Children, Ophthalmology and Otology, Anatomy, Special Clinics.

Graduates of this College, and those holding certificates of attendance upon lectures, are credited for the full time of their medical studies by the Royal College of Surgeons of England, Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow.

#### LOCATION.

While the several other Colleges of the State University are clustered at Berkeley, its Medical Department is, for obvious reasons, situated in San Francisco. The Medical College building, known as "Toland Hall," in honor of its illustrious founder, is one of the most complete and stately in the country. It is located near North Beach, overlooking the Golden Gate, a locality favoring the health and industrious habits of the students.

The Lecture Hall of the College is capable of seating five hundred persons; the Clinical Amphitheater is about equally as capacious; the Museum contains an extensive collection of specimens and preparations; the Dissecting Room is fitted up with all the modern improvements; the Laboratory is replete with all chemicals and apparatus necessary for practical teaching. A suite of apartments in the building is set apart for the Dispensary Clinics.

The College stands near the terminus of the Omnibus line of street-cars, the North Beach and Mission line, and of the Powell street cars.

#### THE COLLEGIATE YEAR.

Contrary to the custom of Eastern Medical Colleges, the lectures in this school are delivered during the Spring and Summer months. The peculiar climate of San Francisco renders Spring and Summer far the preferable season for prosecuting medical studies; hence the sessions are held from March to November. During this period, and indeed largely throughout the other months of the year also, cool trade-winds blow across the city daily, moderating the temperature, and particularly favoring the study of practical anatomy and necroscopy. The student in this city enjoys rare natural advantages for the healthful pursuit of his labors, such a contingency as his detention from lectures or clinics by stress of weather being absolutely unknown.

The College year is divided into two terms: The Preliminary or Spring Term, and the Regular or Summer Term.

THE PRELIMINARY TERM commences March 2d, and ends May 9th. During this term subjects are dwelt upon that do not receive the full meed of attention during the Regular Term. Clinics proceed at the Hospital and College as during the Regular Term. The Dissecting Room is open for practical work. All students are expected to attend this course, although such attendance is not compulsory, except to members of the senior class.

THE REGULAR TERM begins on Monday, June 1st, and terminates on Saturday, October 31st. During this term all the branches of medicine and surgery are taught, didactically and clinically. Regular clinics are held three days each week, at the City and County Hospital, where the Professors of the clinical chairs have charge of wards and possess every advantage for the instruction of students; clinics are also held at the College Dispensary. Lectures are given daily by the Professors, and evening recitations are held three times a week.

## METHODS OF INSTRUCTION.

---

The course of studies pursued at this school comprises Clinical, Didactic, and Laboratory teaching. Special prominence is given to the first, although it is endeavored that the three methods shall be so blended as to form one harmonious whole.

---

### CLINICAL TEACHING.

*In Clinical Teaching*, the plan pursued by the several Clinical Professors has for its aim the actual confronting of the student with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis.

The facilities for clinical studies open to the students of the University have been largely increased. Full access is given to the City and County Hospital, a complete and modern structure containing five hundred beds, and presenting for observation perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, giving them unusual advantages for developing clinical material. The Professor of Clinical Surgery has charge of three surgical wards (thirty-two beds in each), the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology and the Professor of Ophthalmology one ward each. Autopsies are conducted three times a week in the Mortuary by the Pathologist. A large operating theater has been erected, where the major and minor operations of surgery are performed in view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second street with Potrero avenue, and is accessible from the North Beach and Mission cars, the Omnibus, and Mission street lines.

### HOSPITAL CLINICS.

**Clinical Surgery.**—Professor McLean delivers clinical lectures on Practical and Operative Surgery, at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout the session. Especial attention is given in a ward devoted to the purpose to the conduct of disorders of the genito-urinary organs and venereal diseases. A course on Minor Surgery is also given. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, etc.

**Clinical Medicine.**—Professor W. W. Kerr will deliver a course of lectures on Clinical Medicine at the same Hospital each Tuesday, Thursday and Saturday. The course of study will consist in the demonstration of cases illustrating the different phases and peculiarities which disease assumes, the examination of patients at the bedside by the student under the guidance of the Professor, together with the instruction in all those details which qualify the student to discharge his duty agreeably and efficiently in the sick room.

**Gynecology and Practical Midwifery.**—Professor R. Beverly Cole holds a Thursday Clinic, including a course of instruction in Operative Gynecology, the use of instruments, appliances, etc. He will also devote a portion of his lectures to Clinical Midwifery, taking as illustrations such cases of interest as may occur in the Lying-in ward from time to time. The senior students will each, in rotation, have opportunities for the study of Practical Obstetrics at the bedside.

**Ophthalmology and Otology.**—Professor Powers will deliver one didactic lecture a week during the course, covering the subjects of the Eye and Ear, Larynx, Pharynx, Naso-Pharynx and Nasal Cavities. These lectures will be illustrated by models, charts and blackboard drawings. He will also conduct two clinics a week at the City and County Hospital, where, in addition to operative and severe cases, he has a large out-patient clinic, including many children, with many illustrations of cases as they appear in daily practice. At these clinics the third-year students are required, in turn, to keep the record of the cases, with a view to cultivating a habit of case-writing. Once in two weeks Professor Powers has an evening "Quiz" for the third-year students, which is conducted in turn by the students themselves, under the personal supervision of the Professor.

#### COLLEGE DISPENSARY CLINICS.

The Faculty has organized a Free Dispensary Clinic, which is held at the College building, on Tuesdays and Thursdays at 4 P. M.

---

### DIDACTIC TEACHING.

---

A brief outline of the course pursued by the several departments will be found in the following summary:

**Surgery.**—Professor Taylor delivers two lectures each week on the art and science of surgery. The more recent views on the management of surgical conditions and the appliances devised for their relief are particularly dwelt upon and illustrated with drawings and models when necessary. The course will include a series of lectures upon Operative Surgery, with demonstrations on the cadaver. The students will be drilled in the manipulation of instruments used in the various operations.

**Practice of Medicine.**—Professor W. F. McNutt presents in his lectures the principles and practice of medicine in its modern aspects. He gives a description of the different diseases, their etiology, pathology, symptoms, diagnosis, prognosis and treatment. The various pathological changes are demonstrated by means of plates, preparations, and recent specimens of diseased parts.

**Obstetrics.**—The science and art of obstetrics are taught by Professor R. Beverly Cole. His lectures are fully illustrated by the use of colored plates and drawings, prepared specimens, and the manikin. The principal obstetric operations are performed on the cavader in presence of the class.



**Physiology.**—The lectures in this department by Professor D'Ancona embrace a consideration of both general and special physiology, including all that has been developed up to the present time, and are illustrated by a complete series of colored drawings, prepared exclusively for these lectures. Besides which, the large collection of preparations and drawings of the Scientific Department at Berkeley are at the command of the Professor. Vivisections are practiced when necessary, and the use of the microscope fully taught.

The course embraces the lectures of two years, one year being devoted to the physiology of the nervous system and reproduction, the other to nutrition, respiration, circulation, etc.

**Therapeutics (Medical and Surgical).**—The lectures in this department, by Professor Dodge, will explain the physiological actions and therapeutic indications of all agents, medical and surgical, used for the cure, alleviation or prevention of diseases. The action of drugs will be shown by practical demonstration upon living animals.

**Materia Medica and Medical Chemistry.**—Professor A. L. Lengfeld, in his course, will deliver two lectures each week, devoting particular attention to that part of Materia Medica and Chemistry which pertains more particularly to practical medicine and pharmacy, and using for this purpose all necessary philosophical and chemical apparatus. Special attention will be given to Prescription Writing, Urine Analysis, and Toxicology, and to the nature, origin, physical and chemical properties of the various remedies officinal in the United States Pharmacopœia.

The preliminary term will be occupied with a course of lectures in Medico-Legal Chemistry.

Professor Felix Lengfeld (Professor of Chemistry in the South Dakota School of Mines) will, during the regular term, give a special course in General and Pharmaceutical Chemistry, illustrating his lectures with such experiments as may be profitable and interesting to the students.

Dr. H. N. Winton, Assistant to the Chair of Materia Medica and Medical Chemistry, will conduct the laboratory investigations, which comprise Urine Analysis and Toxicology.

I. *Urine Analysis.*—The most approved methods of examining the urine, analytical and microscopical, will be performed by each student.

II. *Toxicology.*—This course will include an extensive range of testing for the various poisons commonly met with in practice.

At least three hours each week will be devoted to laboratory instruction. The courses will conclude with a practical examination.

During the preliminary term, Dr. Winton will deliver one lecture a week on *Electricity*. Particular attention will be given to the practical applications of the laws of electro-physics, and to the proper care and selection of apparatus.

**Anatomy.**—Professor Williamson's lectures on Anatomy are illustrated by the cadaver, and by both wet and dry preparations, models, manikin and drawings, and include a course on general, special and

topographical anatomy. The dissecting room is spacious, well ventilated, lighted from above, and provided with every convenience. It is open throughout the year, under the superintendence of the Professor and Demonstrator of Anatomy. A supply of material is always procurable at small cost. When dissections are conducted in a diligent manner, the student is furnished with certificates stating the amount and part dissected.

**Gynecology.**—This subject is taught didactically and clinically by Professor Cole. The use of gynecological instruments is carefully shown, and the several procedures explained by means of colored charts, diagrams and manikins.

**Hygiene.**—The importance now attaching to the science of Hygiene induced the Regents and Faculty to give it a place in the curriculum of the school. The instruction in this department will be in charge of Professor Washington Ayer.

**Diseases of Children.**—Professor Swan will devote one hour each week to this subject, illustrating his lectures by notes drawn from an unusually large experience in the management of diseases peculiar to children.

**Mental Diseases.**—The lectures on this subject by Dr. Robertson, late Assistant Superintendent of the State Asylum for the Insane at Stockton, aim to impart a practical acquaintance with the forms and manifestations of insanity. The causation and prophylaxis of mental disorders receive special consideration. A supplementary series of lectures is given by the Professor on the *Medical Jurisprudence of Insanity*.

**Histology and Pathology.**—Professor D. W. Montgomery will strive to make this course as practical as possible. Sections of normal tissues and diseased organs ready for mounting will be given to the students, so that they may become familiarized with the methods of preparing specimens for examination. In this way the general principles of normal growth and development, and the operation of pathological laws, will be illustrated and fixed in the mind of the student. The use of the microscope as an aid to diagnosis in the examination of sputum, urine, blood, etc., will also be, in this way, illustrated as opportunity arises.

#### HOSPITAL INTERNES.

The position of Interne in the City and County Hospital is open each December to four members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year and secure opportunities for accumulating an invaluable experience in every field of practical medicine and surgery.

## THE HIGHER STANDARD OF EDUCATION.

### REQUIREMENTS FOR ADMISSION.

In addition to the curriculum already instituted — namely, a three years' graded course of study, with yearly examinations —

A matriculation examination is required in the following subjects :

1. ENGLISH. — A written composition not to exceed one page foolscap in length, upon some subject connected with American history or biography.
2. ARITHMETIC.
3. GEOGRAPHY.
4. PHYSICS.

No matriculation examination will be required of candidates who have received a Collegiate Degree, or who have passed the examination for admission to, or are graduates of, the College of Letters or of Science of the University of California, or who have passed the matriculation examination of any recognized college, or who present a certificate covering the required subjects from a recognized Normal or High School.

Students who have attended one full course in any recognized Medical College, will, upon satisfactory examination in the curriculum provided for the first year, be admitted as students of the *second course* in the University of California.

Students who have attended two courses in any recognized Medical College will be admitted as students of the *third course* in this institution, on passing a satisfactory examination in the curriculum provided for the second year.

Graduates of other regular Medical Colleges in good standing will be admitted as students of the *third course* in this institution without any examination.

Graduates of Pharmaceutical and Dental Colleges in good standing are admitted to the second year without examination.

Theological and Law Students will be admitted to special lectures without examination.

The matriculation examinations will be conducted at the College building on March 2nd and June 1st.

---

### REQUIREMENTS FOR GRADUATION.

I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character.

II. He must have studied medicine three full years, and must have attended three regular courses of lectures, the last of which must have been that of the University of California.

III. He must have passed the required examinations, written and oral.

IV. He must have pursued the study of Practical Anatomy during at least two sessions, and must present certificates of having dissected every part of the cadaver.

V. He must have paid in full the College fees, including the graduation fee.

# BOARDING.

The expense of living in San Francisco is not great. Good board with room-rent may now be procured at the low rate of five dollars per week, at a convenient distance from the College building. Students from a distance may learn the address of these boarding-houses, and other information, by calling on the Dean of the Faculty, Dr. R. A. McLean, 603 Merchant street, corner of Montgomery.

## FEEES.

Matriculation Fee (paid but once).....	\$ 5
Demonstrator's Ticket .....	10
Fee for the First Course of Lectures.....	130
Fee for the Second Course of Lectures.....	130
No Fee is required for the Third Course of Lectures.	
Graduating Fee.....	40

Students who have already attended two full courses of lectures in other regular schools, and graduates of other regular schools who will be of less than three years' standing at the end of a given session, are admitted to the full course of lectures of such session (not including practical anatomy) on the payment of the matriculation fee and sixty-five dollars.

Graduates of other regular schools who will be of three years' standing at the end of a given session are admitted to all the didactic and clinical lectures of such session on payment of the matriculation fee only.

## TEXT-BOOKS AND WORKS OF REFERENCE.

- ANATOMY—Gray, Holden, Weisse, Quain, Ford's Questions.
- PHYSIOLOGY—Flint, Foster, Landois.
- CHEMISTRY—Lloyd's Chemistry of Medicine, Bartley, Witthaus.
- HISTOLOGY—Rindfliesch, Stricker.
- SURGERY—Ashurst, Bryant, Agnew, Toland, Erichsen.
- PRACTICE OF MEDICINE—Loomis, Reynolds, Strumpell, Niemeyer.
- CLINICAL MEDICINE—Da Costa, Hartshorne, Flint.
- MIDWIFERY—Leishman, Playfair, Bedford, Lusk.
- GYNECOLOGY—Thomas, Emmet, Sims.
- MATERIA MEDICA—United States Pharmacopœia, Dispensatories (U. S. and National).
- THERAPEUTICS—Bartholow, Ringer, Brunton, Wood.
- OPHTHALMOLOGY—Williams, Wells.
- OTOLOGY—Roosa, Burnett.
- RHINOSCOPY—Robinson, McKenzie.
- PEDIATRICS—Lewis Smith, Meigs and Pepper, Eustace Smith.
- DERMATOLOGY—Fox, Neumann, Duhring.
- MENTAL DISEASES AND MEDICAL JURISPRUDENCE—Maudsley, Bucknell and Tuke, Reese, Taylor.
- PATHOLOGY—Wagner, Delafield, Coates.
- LARYNGOLOGY—McKenzie, Cohen.
- PRESCRIPTION WRITING—Mann, Gerrish.
- URINE ANALYSIS—Legge, Hoffmann and Ultzmann.

## GRADUATES, 1890.

Bond, Frederick Taylor, Ph.G.....	Vallejo
Felt, Rae.....	Eureka, California
Hawkins, William James.....	San Francisco
Hunkin, Samuel Johns.....	England
Kugeler, Henry B. A.....	San Francisco
Mann, Charles S.....	Newport, Oregon
Martinez, John Matro.....	Guatemala
Meyer, Albert George.....	San Francisco
Mohun, Charles C., Ph.G.....	Sacramento
Scholl, Albert J., M.D.....	Port Washington, Wisconsin
Spring, Charlotte B.....	San Francisco
Surryhne, Benjamin Franklin.....	Oakland, California
Thrasher, Marion, A.M.....	Connorsville, Indiana

## MATRICULANTS, 1890.

Adelung, C. von, B.S.....	Oakland, California
Bailey, R. J.....	Fort Ripley, Minnesota
Baker, H. F.....	Rochester, New York
Blake, C. R.....	San Francisco, California
Burnham, C. J.....	Folsom, California
Burton, L. L., LL.B.....	Oakland, California
Caglieri, G. E., B.S.....	San Francisco, California
Castagnetto, A.....	San Francisco, California
Comyns, J. S.....	San Francisco, California
Colditz-Olsen, Marie.....	Sweden
Collischonn, P.....	Oakland, California
Conklin, Frank.....	San Francisco, California
Crees, R.....	Philadelphia, Pennsylvania
Crook, Emma E.....	Paia, Hawaii
Driscoll, E. P., Ph.G.....	San Francisco, California
Dunbar, A. W.....	Cannon Falls, Minnesota
Elwert, C. P., Ph.G.....	Portland, Oregon
Feuss, J. H.....	Bremen, Germany
Fitzgibbon, F. T.....	San Francisco, California
Ford, C. C.....	Frankford, Minnesota
Fraser, S. J.....	San Rafael, California
Freeman, E. M., A.B.....	Nova Scotia
Gilbride, B. C.....	British Columbia
Gibbon, G. E.....	San Francisco, California
Hooper, H.....	San Francisco, California
Iredale, C. W.....	San Francisco, California
Johnstone, E.....	England
Kalliwoda, H., M.D.....	Athens, Georgia
Kirby, W. T.....	San Francisco, California
Lagan, E.....	Londonderry, Ireland



Larkey, F. X.....	San Francisco, California
Looney, M. S. A., D.Sc., LL.D., Ph.D.....	Ireland
Lovdal, G. B.....	Sacramento, California
Lowe, F. W.....	Knight's Ferry, California
Macdonald, J. M.....	Nova Scotia
Marconnay, A. B.....	Germany
McCone, J. F., B.S. ....	San Francisco, California
McMenomey, C. F. ....	San Francisco, California
McMurdo, J. R., Ph.G.....	San Francisco, California
Miller, P.....	Alameda, California
Milton, J. L.....	Oakland, California
Mish, S. C.....	San Francisco, California
Molony, J. J., Ph.G.....	San Francisco, California
Morse, F. W.....	Oakland, California
Nelson, J. A.....	Sacramento, California
Nicholson, J. E.....	Oakland, California
O'Donnell, G. W.....	San Francisco, California
Ogden, G. W.....	Sacramento, California
Oviedo, L. P., B.S.....	San Francisco, California
Payne, R. W., M.D.....	Novato, California
Petrie, F. B., Ph.G.....	San Francisco, California
Quigley, J. M.....	San Francisco, California
Rathbun, W. T.....	Colusa, California
Russell, Mrs. Annie K.....	Seattle, Washington
Ryer, M. R.....	San Francisco, California
Sanborn, F. F.....	Indianapolis, Indiana
Simon, G.....	San Francisco, California
Sims, M. J.....	San Francisco, California
Schlenker, F. W.....	Ridgetown, Ontario
Schram, Lillie B.....	St. Helena, California
Smith, W. O.....	Vermont
Smith, H. S.....	Sacramento, California
Shurtleff, B. E.....	Napa, California
Stanton, E. B.....	San Francisco, California
Terry, W. I.....	Sacramento, California
Tyrrell, G. G.....	Sacramento, California
Tiedemann, C. W.....	New York
Van Werthen, J., Ph.G.....	San Francisco, California
Vroom, J. N., M.D.....	Washingtonville, New York
Warner, J. K.....	Shulloburg, Wisconsin
Wayson, J. T.....	Port Townsend, Washington

#### SUMMARY.

Graduates, 1890.....	13
Undergraduates, 1890.....	71
Total.....	84

## COMPLETE LIST OF GRADUATES.

Addington, D. M.	Michigan Bar, California.	1879
Allen, Edward O.	New York, New York.	1875
Alexander, Monrove E.	Albany, Oregon.	1888
Anderson, J. A.	Kansas.	1873
Anderson, Winslow.	San Francisco, California.	1884
Armistead, Howell V.	Modesto, California.	1885
Baldwin, Robert O.	Danville, California.	1885
Barbat, John H., Ph.G.	San Francisco, California.	1888
Barber, Edward T.	Eel River, California.	1866
Bates, Charles B.	Santa Barbara, California.	1868
Bates, Walter E.	Oakland, California.	1881
Beardsley, E. M.	San Francisco, California.	1881
Beaumeister, B. H.	San Francisco, California.	1882
Beede, William M. S.	Bakersfield, California.	1884
Benedict, C. W.	Virginia.	1875
Bettleheim, A. F.	San Francisco, California.	1880
Biggs, F. P.	Valparaiso.	1874
Biggs, M. H.	Santa Barbara, California.	1870
Blake, Chas. M.	San Francisco, California.	1876
Blake, James W.	San Francisco, California.	1874
Bond, Fred. T.	Vallejo.	1890
Bordé, Henry J.	San Jose, California.	1883
Bradbury, Geo. F.	San Francisco, California.	1878
Brannan, J. J.	Berkeley, California.	1876
Brierly, Conant B.	San Francisco, California.	1876
Bromly, R. I.	Oakland, California.	1878
Brown, Ernest S.	San Francisco, California.	1886
Brown, Geo. J.	Biggs Station, California.	1876
Bruns, W. C.	San Francisco, California.	1878
Buckley, Vincent P.	San Francisco, California.	1884
Bunker, Robert E.	Bloomington Ferry, Minnesota.	1889
Burchard, L. S.	Oakland, California.	1882
Cairns, John C.	San Francisco, California.	1876
Calbreath, John F.	Weston, Virginia.	1875
Caldwell, H. H.	San Jose, California.	1880
Caldwell, Robert.	San Jose, California.	1869
Callaghan, D. T.	Grand Gulf, Mississippi.	1873
Cameron, James S.	San Francisco, California.	1868
Chaigneau, V. A.	San Francisco, California.	1876
Churchill, Leonard.	San Francisco, California.	1871
Chalmers, Wm. P.	Watsonville, California.	1886
Clark, J. J.	San Francisco, California.	1869
Clark, Wm. D.	San Francisco, California.	1884
Clinton, C. A.	San Francisco, California.	1881
Cluness, Wm. R., Jr.	Sacramento, California.	1887
Cochran, W. A.	San Francisco, California.	1869
Conlan, Wm. E.	San Francisco, California.	1886

Collins, Addison C.....	Davisville, California.....	1885
Connolly, John J.....	San Francisco, California.....	1878
Connolly, Thos. E.....	Vallejo, California.....	1884
Cook, Frank S.....	Tucson, Arizona.....	1887
Corbett, S. J.....	San Francisco, California.....	1868
Cox, Rosamond L.....	New York, New York.....	1888
Cox, Thos. H.....	San Francisco, California.....	1873
Curran, Mary K.....	San Francisco, California.....	1878
Damour, Ferdinand.....	San Francisco, California.....	1864
D'Ancona, Arnold A., A.B.....	San Francisco, California.....	1884
Davie, J. C., Jr.....	Victoria, Vancouver's Island...	1864
Davidson, Joseph R.....	Salem, Oregon.....	1875
Dawson, Alson.....	New York, New York.....	1875
Day, John G.....	San Francisco, California.....	1884
Dean, Andrew J.....	San Francisco, California.....	1881
Delmont, Francois.....	San Buenaventura, California...	1874
Dennis, Nathan P.....	San Francisco, California.....	1888
Deputy, Anson A.....	San Francisco, California.....	1881
Dodge, Henry W.....	San Francisco, California.....	1884
Downs, George W.....	Vallejo, California.....	1879
Drinkhouse, E. J. C.....	San Francisco, California.....	1865
Dubois, A. L.....	Lincoln, California.....	1864
Duncan, S. C.....	Vallejo, California.....	1877
Dunn, James P. H., S.B.....	Berkeley, California.....	1888
Enright, Chas. M., A.B.....	Santa Clara, California.....	1884
Estes, Melvin B.....	San Francisco, California.....	1888
Evans, C. W.....	Modesto, California.....	1881
Felt, Rae.....	Eureka, California.....	1890
Fenn, C. N.....	San Francisco, California.....	1865
Fine, Andrew.....	San Jose, California.....	1866
Foote, Gilbert.....	Lakeford, California.....	1879
Foreman, Francesca I.....	San Francisco, California.....	1889
Fottrell, Michael J.....	San Francisco, California.....	1887
Foulkes, J. F., Jr.....	Oakland, California.....	1880
Frick, Euclid B.....	Philadelphia, Pennsylvania.....	1888
Frost, Joseph.....	Vallejo, California.....	1877
Gale, Herbert A.....	Sacramento, California.....	1879
Gallwey, John.....	San Francisco, California.....	1885
Gates, Frank H.....	San Francisco, California.....	1884
Gilham, G. W.....	Oakland, Oregon.....	1881
Glaze, George I.....	Saratoga, Kansas.....	1887
Gleaves, Christopher C.....	Anderson, California.....	1889
Grattan, E. L.....	San Francisco, California.....	1881
Gros, Edward.....	San Francisco, California.....	1865
Guilemard, A. J.....	San Francisco, California.....	1878
Hackett, John.....	San Francisco, California.....	1867
Haile, C. S.....	Alameda, California.....	1869
Hampton, James E.....	San Francisco, California.....	1871
Handy, J. C.....	San Francisco, California.....	1864

Hansen, Thomas C.	San Francisco, California	1867
Happersberger, Albert K., A.B.	San Francisco, California	1888
Harmon, R.	Oakland, Oregon	1879
Harris, Thomas W.	Russellville, Indiana	1875
Haskin, Wm. H.	San Francisco, California	1889
Hawkins, Wm. J.	San Francisco, California	1890
Heavitt, Granville.	San Francisco, California	1866
Heinimann, J. M.	San Francisco, California	1877
Hicks, Young E.	Merced, California	1874
Hodgdon, W. H. A.	San Francisco, California	1876
Holmes, Edw. R.	Walla Walla, Washington	1889
Hook, Walter E.	Walnut Creek, California	1879
Hopkins, T. P.	San Francisco, California	1880
Howard, Katherine I.	San Francisco, California	1885
Howard, Wm. B.	Modesto, California	1887
Howell, H. H.	Knight's Ferry, California	1879
Hughes, Jerome A.	San Francisco, California	1883
Hughes, L. J.	San Francisco, California	1879
Hunkin, Sam. J.	San Francisco, California	1890
Johnstone, A.	San Francisco, California	1879
Jones, Ottowell W.	San Francisco, California	1889
Joseph, Simon E.	East Portland, Oregon	1877
Kawakami, Masayasu.	Japan	1889
Keane, George B.	San Francisco, California	1872
Kelly, John L.	Lewiston, Idaho	1888
Kingsley, Thomas H.	San Francisco, California	1886
Kirchhoffer, Frederick	San Francisco, California	1887
Kirkpatrick, C. A.	Redwood City, California	1871
Kirkwood, J. W.	Salem, Oregon	1876
Kobayashi, Sankio.	Japan	1887
Kosbue, A. Emil.	Hamburg, Germany	1875
Kugeler, Henry B. A.	San Francisco, California	1890
Kurtz, Joseph	Los Angeles, California	1875
Laidlaw, Horace	Oakland, California	1880
Le Fevre, J. P.	Plumas County, California	1881
Lewitt, F. A.	San Francisco, California	1878
Lindenberger, W. H.	Bartlett Springs, California	1876
Lingo, Marin B.	Salem, Oregon	1866
Lonigo, Emile V.	San Francisco, California	1883
Lord, Franklin F.	San Francisco, California	1880
Lovett, Wm. B.	Oakland, California	1883
Lundborg, Gustaf W.	San Francisco, California	1883
Lustig, Daniel D., Ph.G.	San Francisco, California	1885
Lyford, L. Dexter.	San Francisco, California	1872
Mackenzie, J. H.	Edinburgh, Scotland	1870
Mann, Chas. S.	Newport, Oregon	1890
Martineaut, E. D.	San Francisco, California	1873
Martinez, John M.	San Francisco, California	1890
Marx, Frances R.	San Francisco, California	1889

Mason, Benjamin F.	San Francisco, California	1875
Mather, Squire R.	Kelseyville, California	1889
Matthewson, J. M.	San Francisco, California	1882
Mayer, Oscar J., Ph.G.	San Francisco, California	1889
Mays, Arthur H.	Stockton, California	1887
Mays, Wm. H.	San Francisco, California	1873
McColl, G. F.	East Portland, Oregon	1877
McCormack, Herbert F., A.B.	St. Helena, California	1876
McCoy, Juan W.	Bell's Ridge, California	1884
McDermott, Wm. P.	San Francisco, California	1874
McDonald, J. J.	San Francisco, California	1877
McGuire, Lucius	San Francisco, California	1868
McLaughlin, M. A.	San Francisco, California	1878
McLean, John T.	Modesto, California	1887
McLean, Robert A.	Modesto, California	1874
Mervy, Emile C.	San Francisco, California	1883
Merritt, T. W.	San Francisco, California	1882
Meyer, Albert G.	San Francisco, California	1890
Meyers, R. C.	San Francisco, California	1880
Miller, Chas. F.	San Francisco, California	1874
Miller, John A.	San Francisco, California	1875
Minor, John F.	San Francisco, California	1876
Mohun, Chas. C., Ph.G.	San Francisco, California	1890
Moody, Mary F.	San Francisco, California	1882
Morgan, F. E.	Santa Cruz, California	1881
Morrill, Augustus L.	Colima, Mexico	1887
Mueller, H. E.	Brooklyn, California	1880
Muenter, Henry	Stockton, California	1882
Newmark, Valentine	San Francisco, California	1868
Nichols, Theodore A.	Mission San Jose, California	1885
Noble, John A.	St. Johns, Canada	1888
Nottage, George E.	Stockton, California	1874
Nuttall, George H. F.	San Francisco, California	1884
O'Brien, Aloysius P.	Port Townsend, Washington	1889
Olds, Wm. H.	San Francisco, California	1881
Oliver, Joseph A.	San Francisco, California	1889
O'Neill, A. A.	San Francisco, California	1867
O'Neill, J. C.	Vallejo, California	1873
Oster, Chas.	Oakland, Oregon	1878
Park, Theorilda C.	San Francisco, California	1887
Parts, Herman	San Francisco, California	1884
Paton, Chas. J.	San Francisco, California	1883
Patterson, T. J.	Visalia, California	1882
Payne, J. R.	San Francisco, California	1882
Perrault, Edward L.	San Francisco, California	1885
Pescia, Joseph	San Francisco, California	1877
Plant, Benj. A.	Sacramento, California	1886
Plummer, Richard H.	Yolo, California	1866
Pond, Henry M.	San Francisco, California	1880



Pond, W. B.....	San Francisco, California.....	1864
Pope, Horace E.....	San Francisco, California.....	1876
Powell, J. M.....	Mammoth, Oregon.....	1876
Pressley, J. B.....	Santa Rosa, California.....	1882
Prevost, J. Renny.....	San Jose, California.....	1866
Pruett, J. A.....	Pendleton, Oregon.....	1878
Quinlan, Albert P.....	San Francisco, California.....	1876
Reardon, T. B.....	Oroville, California.....	1882
Reardon, Wm. E.....	San Francisco, California.....	1887
Reed, Clarence E.....	Placerville, California.....	1883
Reich, George A.....	San Francisco, California.....	1877
Reynolds, George E.....	San Francisco, California.....	1877
Richardson, J. A.....	Amity, Oregon.....	1866
Riley, J. S.....	Vallejo, California.....	1883
Robertson, John W.....	San Francisco, California.....	1880
Robinson, Luke.....	Petaluma, California.....	1867
Rorke, James.....	San Francisco, California.....	1876
Rucker, H. N.....	Santa Clara, California.....	1870
Rupe, Samuel H.....	Healdsburg, California.....	1866
Sabey, L. A.....	San Francisco, California.....	1880
Sage, H. T.....	San Francisco, California.....	1870
Sawyer, H. C.....	San Francisco, California.....	1881
Schellhaus, E. J.....	Huron County, Ohio.....	1875
Schnabel, Martin.....	Newcastle.....	1873
Scholl, Albert J., M.D.....	San Francisco, California.....	1890
Scholl, Albert L., Ph.G.....	San Francisco, California.....	1884
Scott, Arthur W.....	San Francisco, California.....	1879
Seavey, L. T.....	Port Townsend, Washington.....	1878
Seawell, John L.....	Healdsburg, California.....	1870
Seawell, Thomas H.....	Healdsburg, California.....	1876
Sellon, Anna F.....	San Francisco, California.....	1881
Senter, E. S.....	San Jose, California.....	1882
Shannon, James.....	San Francisco, California.....	1887
Sheets, John H.....	Phoenix, Arizona Territory.....	1881
Shelton, Thomas W.....	Salem, Oregon.....	1867
Sherman, Elenora S.....	San Francisco, California.....	1884
Shuey, Sarah I.....	East Oakland, California.....	1878
Sichel, Gust. W.....	San Francisco, California.....	1876
Simon, Jules A.....	Paris, France.....	1875
Soboslay, Julius.....	San Francisco, California.....	1886
Smith, George S.....	San Francisco, California.....	1879
Smith, T. H.....	Eureka, California.....	1876
Smith, William P.....	Salem, Oregon.....	1875
Sparkes, Agnes.....	San Francisco, California.....	1879
Spring, Charlotte B.....	San Francisco, California.....	1890
Stanton, James.....	San Francisco, California.....	1882
Steely, John.....	Kirbyville, Oregon.....	1867
Stevenson, J. R.....	San Francisco, California.....	1877
Stewart, J. M.....	San Francisco, California.....	1882

Stivers, C. A.....	San Francisco, California.....	1864
Summers, G. M.....	Sonora, California.....	1876
Summers, John F.....	San Francisco, California.....	1878
Surryhne, Benj. F.....	San Francisco, California.....	1890
Sutro, Emma L.....	San Francisco, California.....	1881
Swann, Charles M. ....	San Francisco, California .....	1875
Swisher, J. R.....	Danville, Illinois.....	1877
Tartar, A. P.....	Tehama, California.....	1882
Taylor, Edward R.....	San Francisco, California.....	1865
Tevis, Henry L.....	San Francisco, California.....	1887
Thrasher, Marion.....	San Francisco, California.....	1890
Toland, Charles A.....	San Francisco, California.....	1869
Tuggle, Samuel P.....	Memphis, Tennessee.....	1889
Turner, J. T.....	Mariposa, California.....	1869
Tuttle, H. P.....	Castroville, California.....	1869
Urban, Kurt.....	San Francisco, California.....	1883
Voigt, W. C.....	San Francisco, California.....	1879
Von Buelo, F.....	San Francisco, California.....	1877
Wade, Mark S.....	San Francisco, California.....	1889
Walz, G.....	San Francisco, California.....	1868
Wanzer, L. M. F.....	San Francisco, California.....	1876
Watanabe, Tey.....	Japan.....	1887
Waters, John W.....	Carson City, Nevada.....	1874
Webber, J. S.....	Sierra County, California.....	1869
Weeks, F. L.....	San Francisco, California.....	1864
Wheaton, S. P.....	Oakland, California.....	1877
Whittell, A. P.....	San Francisco, California.....	1873
Weiss, E. M.....	San Francisco, California.....	1877
Welch, W. P.....	San Francisco, California.....	1864
White, James T.....	Oakland, California.....	1888
Wickman, Wm. J.....	San Francisco, California .....	1883
Widney, J. P.....	Santa Clara, California.....	1867
Wilcox, Wilber J.....	Oakland, California.....	1885
Williams, Robert B.....	San Francisco, California.....	1887
Williamson, John M.....	Vallejo, California.....	1885
Williamson, W. T.....	East Portland, Oregon.....	1877
Wilson, Kemlo R. McD.....	San Francisco, California.....	1886
Winton, Henry N.....	Haywards, California.....	1885
Woods, W. E. Josephine.....	San Francisco, California.....	1885
Wooster, David.....	San Francisco, California.....	1885
Young, Junius D.....	Stockton, California.....	1881
Younger, Alex. J.....	San Francisco, California.....	1869
Younger, Edward A.....	San Francisco, California.....	1879
Zeyn, Gustav C.....	Anaheim, California.....	1889

Total.....286

## THE ALUMNI ASSOCIATION.

---

The Alumni Association of the Medical Department of the University of California now includes in its membership most of the graduates of the institution, and the officers for the ensuing year take pleasure in announcing a prosperous outlook for the Association.

The objects of the Society are the promotion of the prosperity of our *Alma Mater*, the maintenance and cultivation of fraternal feeling among the Alumni, and the advancement of the interest of medical education and the diffusion of scientific knowledge.

The Professors and Teachers in the Medical Department are entitled to honorary membership with an appropriate certificate.

The meetings during 1891 will be held monthly, at the offices of the members residing in San Francisco, and the annual meeting will be held in a public hall the early part of November. At these meetings medical and scientific topics will be brought up for discussion, and all present asked to participate.

Papers and reports of special cases are solicited from members outside of the city or abroad.

The annual banquet will be given the evening preceding the commencement exercises of the College.

The following officers have been elected for 1891 :

JAS. W. BLAKE, M. D., President.

M. W. MOODY, M. D., Vice-President.

JULES SIMON, M. D., Secretary.

K. I. HOWARD, M. D., Treasurer.

*Executive Committee.*

A. P. WHITTELL, M. D.

WASHINGTON DODGE, M. D.

L. M. F. WANZER, M. D.

All alumni are cordially invited to identify themselves with the Association and assist in the promotion of its welfare.

For further particulars address the Secretary of the Association—

JULES SIMON, M. D.,

No. 323 Geary Street,

San Francisco, Cal.

# UNIVERSITY OF CALIFORNIA.

## ACADEMIC SENATE.

NOTE.—The Faculties of the University, together with the Instructors, constitute by law the Academic Senate.

The names, excepting those of the President and Secretary, are arranged in the order of original accession to membership in the Academic Senate.

MARTIN KELLOGG, A. M. . . . . PRESIDENT *pro tempore*  
Bushnell Street, near College Way, Berkeley.  
*Professor of the Latin Language and Literature.*

JOHN HARMON C. BONTÉ, D.D. . . . . SECRETARY.  
Dwight Way, near Choate Street, Berkeley.  
*Professor of Legal Ethics.*

JOHN LeCONTE, A.M., M.D., LL.D. . . . . Corner Mark Street and  
Dwight Way, Berkeley.  
*Professor of Physics.*

JOSEPH LeCONTE, A.M., M.D., LL.D. . . . . Bancroft Way, near  
Piedmont Avenue, Berkeley.  
*Professor of Geology and Natural History.*

FRANK SOULÉ, GRADUATE U. S. MILITARY ACADEMY, WEST POINT.  
960 Oak Street, Oakland.  
*Professor of Civil Engineering and Astronomy.*

STEPHEN JOHNSON FIELD, LL.D. . . . . Washington, D. C., and  
San Francisco.  
*Honorary Professor of Law.*

WILLARD BRADLEY RISING, A.M., M.E., Ph.D. . . . Corner Chapel  
Street and Allston Way, Berkeley.  
*Professor of Chemistry.*

GEORGE WOODBURY BUNNELL, A.M. . . . 1955 Telegraph Avenue,  
Oakland.  
*Professor of the Greek Language and Literature.*

GEORGE DAVIDSON, Ph.D., D.Sc. . . . . U. S. Appraiser's Building,  
San Francisco.  
*Honorary Professor of Geodesy and Astronomy.*

RICHARD BEVERLY COLE, A.M., M.D., M.R.C.S., Eng. . . 218 Post  
Street, San Francisco.  
*Professor of Obstetrics and Gynecology.*

MELANCTHON WILLIAMS FISH, M.D. . 461 East Fourteenth Street,  
Oakland.  
*Emeritus Professor of Physiology and Microscopy.*

GEORGE CUNNINGHAM EDWARDS, Ph.B. . . 1568 Webster Street,  
Oakland.  
*Associate Professor of Mathematics.*

ALBIN PUTZKER. . . Corner Humboldt Ave. and Parker St., Berkeley.  
*Professor of the German Language and Literature.*

- EUGENE WOLDEMAR HILGARD, PH.D., LL.D. . . . . Bancroft Way,  
near Audubon Street, Berkeley.  
*Professor of Agriculture and Agricultural Chemistry, and Director of  
Agricultural Experiment Stations.*
- SAMUEL BENEDICT CHRISTY, PH.B. . . . . Piedmont Avenue, near  
Bancroft Way, Berkeley.  
*Professor of Mining and Metallurgy.*
- FREDERICK SLATE, B.S. . . Audubon St., near Bancroft Way, Berkeley.  
*Associate Professor of Physics and Instructor in Mechanics.*
- FREDERICK GODFREY HESSE. . . Corner Broadway and Telegraph  
Avenue, Oakland.  
*Professor of Mechanical Engineering.*
- BERNARD MOSES, PH.D.\* . . . Audubon St., near University Grounds,  
Berkeley.  
*Professor of History and Political Economy.*
- WILLIAM CAREY JONES, A.M. . . . . University Avenue, near  
Oxford Street, Berkeley.  
*Associate Professor of United States History.*
- WILLIAM THEODORE WENZELL, M.D., PHARM. M. . . . . 153 Grove  
Street, San Francisco.  
*Professor of Chemistry in the College of Pharmacy.*
- ROBERT ARMISTEAD McLEAN, M.D. . . . . 603 Merchant Street,  
San Francisco.  
*Professor of Clinical and Operative Surgery; Dean of the Medical Faculty.*
- GEORGE AUGUSTUS SHURTLEFF, M.D. . . . . . . . . . Stockton.  
*Emeritus Professor of Mental Diseases and Medical Jurisprudence.*
- WILLIAM FLETCHER McNUTT, M.D., L. R. C. S. AND L. R. C. P.  
Corner Sutter and Montgomery Streets, San Francisco.  
*Professor of the Principles and Practice of Medicine.*
- SERRANNO CLINTON HASTINGS, LL.D. . . . . Phelan Building,  
San Francisco.  
*Professor of Comparative Jurisprudence.*
- EDMOND O'NEILL, PH.B. . . . . . . . . . 1403 Chestnut Street, Oakland.  
*Assistant Professor of Chemistry.*
- EDWARD JAMES WICKSON, A.M. . . . . . . . . . Corner Bancroft Way and  
Audubon Street, Berkeley.  
*Lecturer on Practical Agriculture, and Assistant Superintendent of the  
Experimental Grounds.*
- HANS HERMAN BEHR, M.D. . . . . 509 Kearny Street, San Francisco.  
*Professor of Botany in the College of Pharmacy.*
- EDWARD WHEELOCK RUNYON, PH.G. . . 234 Sutter St., San Francisco  
*Professor of the Theory and Practice of Pharmacy, and Dean of the  
Pharmaceutical Faculty.*
- WILLIAM MARTIN SEARBY. . . . . 1717 Eddy Street, San Francisco.  
*Professor of Materia Medica in the College of Pharmacy.*

---

\* Absent on leave.



- WILLIAM HENRY MAYS, M.D.. 46 O'Farrell Street, San Francisco.  
*Professor of Mental Diseases and Medical Jurisprudence.*
- WILLIAM EDWIN TAYLOR, M.D.. 215 Geary Street, San Francisco.  
*Professor of the Principles and Practice of Surgery.*
- CLARK LAMOTTE GODDARD, A.M., D.D.S. . . . . 131 Post Street,  
San Francisco.  
*Professor of Orthodontia and Dental Metallurgy.*
- ABRAHAM LEWIS LENGFELD, M.D.. 954 Market St., San Francisco.  
*Professor of Materia Medica and Medical Chemistry.*
- IRVING STRINGHAM, PH.D. . . . . Piedmont Avenue, facing  
Bancroft Way, Berkeley.  
*Professor of Mathematics, Dean of the Faculty of Letters and of the  
Faculties of Science.*
- EDWARD LEE GREENE, PH.B. . . . . University Avenue, between  
Sherman and Grant Streets, Berkeley.  
*Assistant Professor of Botany.*
- CORNELIUS BEACH BRADLEY, A.M.\*. 668 Eighteenth St., Oakland.  
*Associate Professor of the English Language and Literature.*
- WILLIAM BREAKKEY LEWITT, M.D., 605 Laguna St., San Francisco.  
*Professor of Anatomy.*
- BENJAMIN RALPH SWAN, M.D., 310 Stockton Street, San Francisco.  
*Professor of the Diseases of Children.*
- GEORGE HOLMES HOWISON, LL.D. . . . . Dwight Way, near  
Choate Street, Berkeley.  
*Mills Professor of Intellectual and Moral Philosophy and Civil Polity.*
- LUIS LANE DUNBAR, D.D.S. . . . . 500 Sutter Street, San Francisco.  
*Professor of Operative Dentistry and Dental Histology, and  
Dean of the Dental Faculty.*
- MAURICE JAMES SULLIVAN, D.D.S. . . . 30 Post St., San Francisco.  
*Professor of Dental Pathology and Therapeutics.*
- CHARLES WILLIAM SLACK, PH.B., LL.B. . . . . 212 Sansome Street,  
San Francisco.  
*Professor of Municipal Law.*
- HERMANN KOWER, C.E. . . . . 906 Broadway, Oakland.  
*Instructor in Instrumental Drawing.*
- EDWARD SINGLETON HOLDEN, A.M., LL.D. . . . Mount Hamilton.  
*Director of the Lick Observatory, and Astronomer.*
- WASHINGTON AYER, M.D. . . . . 410 Kearny Street, San Francisco.  
*Professor of Hygiene.*
- GEORGE HERMAN POWERS, A.M., M.D. . . . . 215 Geary Street,  
San Francisco.  
*Professor of Ophthalmology and Otology.*
- JOACHIM HENRY SENGER, PH.D. . 2122 Steiner St., San Francisco.  
*Instructor in German and Greek.*

---

\* Absent on leave.

WILLIAM WATT KERR, A.M., M.B., C.M. . . . . 600 Sutter Street,  
San Francisco.

*Professor of Clinical Medicine.*

FELICIEN VICTOR PAGET, BACHELIER ÈS LETTRES, BACHELIER ÈS  
SCIENCES . . . . . 1128½ Turk Street, San Francisco.

*Assistant Professor of the French and Spanish Languages.*

ARNOLD ABRAHAM D'ANCONA, A.B., M.D. . . . . 405 Montgomery  
Street, San Francisco.

*Professor of Physiology and Microscopy.*

THOMAS RUTHERFORD BACON, A.B. . . . . Bushnell St., Berkeley.

*Associate Professor of European History.*

ELISHA WILLIAMS MCKINSTRY, LL.D. 4 Sutter St., San Francisco.

*Professor of Municipal Law.*

WILLIAM DALLAM ARMES, PH.B. . . . . Dwight Way, between  
Fulton and Ellsworth Streets, Berkeley.

*Instructor in English.*

DOUGLAS WILLIAM MONTGOMERY, M.D. . . . . 1124 Sutter Street,  
San Francisco.

*Professor of Pathology and Microscopy; Curator of the Medical Department.*

GEORGE MOREY RICHARDSON, PH.D. . . . . Durant Avenue, near  
Shattuck Avenue, Berkeley.

*Instructor in Latin.*

FRANK GAYLORD HUBBARD, PH.D. . . . . Audubon Street, near  
University Grounds, Berkeley.

*Instructor in English.*

CHARLES MILLS GAYLEY, A.B. . . . . Bushnell Street, Berkeley.

*Professor of the English Language and Literature.*

JOHN HATFIELD GRAY, JR., B.S. . . . . Durant Avenue, near Fulton  
Street, Berkeley.

*Instructor in Chemistry.*

MELLEN WOODMAN HASKELL, PH.D. . . . . Durant Avenue, near  
Shattuck Avenue, Berkeley.

*Assistant Professor of Mathematics.*

ARMIN OTTO LEUSCHNER, A.B. . . . . Choate Street, near University  
Grounds, Berkeley.

*Instructor in Mathematics.*

ALEXANDER F. LANGE, A.M. . . . . University Avenue, near  
Oxford Street, Berkeley.

*Assistant Professor of English.*

ADOLPH CASPAR MILLER, A.M. . . . . Corner of Haste and South  
Atherton Streets, Berkeley.

*Lecturer on Political Economy.*

BENJAMIN HARRISON RANDOLPH, FIRST LIEUTENANT, THIRD  
U. S. ARTILLERY . . . . . Alameda.

*Professor of Military Science and Tactics.*

# UNIVERSITY OF CALIFORNIA.

## COLLEGE OF DENTISTRY.

DONAHOE BUILDING, CORNER MARKET AND TAYLOR STREETS, S. F.

### FACULTY.

———, President of the University, and *ex-officio* President of the Faculty.

JOSEPH LeCONTE, M.D., LL.D., Honorary Professor of Biology.

C. L. GODDARD, A.M., D.D.S., Professor of Mechanical Dentistry, Dental Metallurgy and Orthodontia.

L. L. DUNBAR, D.D.S., Dean, and Professor of Operative Dentistry and Dental Histology.

MAURICE J. SULLIVAN, D.D.S., Professor of Dental Pathology and Therapeutics.

W. E. TAYLOR, M.D., Professor of the Principles and Practice of Surgery.

A. L. LENGFELD, M.D., Professor of Materia Medica and Medical Chemistry.

WILLIAM B. LEWITT, M.D., Professor of Anatomy.

A. A. D'ANCONA, A.B., M.D., Professor of Physiology.

W. XAVIER SUDDUTH, M.D., D.D.S., Special Lecturer on Histology and Pathology.

### LECTURERS, DEMONSTRATORS AND ASSISTANTS.

CHARLES BOXTON, D.D.S., Lecturer on Mechanical Dentistry.

J. L. ASAY, M.D., Lecturer on Oral Surgery.

FELIX LENGFELD, Ph.G., Ph.D., Lecturer on Chemistry.

HARRY P. CARLTON, D.D.S., Lecturer on Operative Dentistry.

S. A. HACKETT, D.D.S., Demonstrator of Mechanical Dentistry.

E. O. COCHRANE, D.D.S., Demonstrator of Continuous Gum Work.

J. T. ROWAND, D.D.S., Demonstrator of Crown and Bridge Work.

JOHN H. BARBAT, Ph.G., M.D., Demonstrator of Anatomy.

H. N. WINTON, M.D., Assistant to the Chair of Materia Medica and Medical Chemistry.

F. J. LANE, D.D.S., Demonstrator of Operative Dentistry.

EDWARD N. SHORT, D.D.S., Demonstrator of Operative Dentistry.

EDWARD W. PRATT, D.D.S., Demonstrator of Mechanical Dentistry and Metallurgy.

CLINICAL INSTRUCTORS.

GEO. H. CHANCE, D.D.S.	A. F. McLAIN, M.D., D.D.S.
H. C. DAVIS, L.D.S.	W. E. PRICE, D.D.S.
W. DECROW.	MAX SICHEL.
W. B. KINGSBURY.	E. L. TOWNSEND, D.D.S.
H. E. KNOX, D.D.S.	L. VAN ORDEN, M.D.
F. J. LANE, D.D.S.	WILLIAM WOOD.

---

The session of 1891 begins April 6th and ends December 31st.

---

Graduates in Medicine may apply for the Degree of Doctor of Dental Surgery, after having passed *two* full years of practical instruction or experience in Dentistry, *one* year of which, including one course of lectures, must be spent in this institution.

In accordance with a rule adopted by the National Association of Dental Faculties, requiring three years' attendance of all matriculates, to take effect in 1892, matriculates who are graduates in Medicine will be admitted to the second year without examination.

Graduates of the Dental Department are admitted to the Medical Department as students of the second year, without examination.

FEES.

Matriculation (paid but once).....	\$ 5 00
Tuition.....	120 00
Demonstrator of Anatomy's Fee.....	10 00
Diploma.....	30 00

---

For Annual Announcement, address—

L. L. DUNBAR, Dean,  
No. 500 Sutter Street, San Francisco.

# UNIVERSITY OF CALIFORNIA.

## DEPARTMENT OF PHARMACY.

---

### CALIFORNIA COLLEGE OF PHARMACY.

#### FACULTY.

———, President of University of California.

WILLIAM T. WENZELL, M.D., Ph.G., Ph.M., Professor of Chemistry.

HERMANN H. BEHR, M.D., Professor of Botany.

WILLIAM M. SEARBY, Professor of Materia Medica.

EDWARD W. RUNYON, Ph.G., Professor of Pharmacy.

---

The Nineteenth Annual Course will begin April 6, 1891, and continue to October 1st of the same year. Lectures will be delivered on Chemistry, Materia Medica, Botany, Theoretical and Practical Pharmacy. Arrangements have been made to provide Laboratory Instruction in Chemical and Pharmaceutical work, and in every respect efforts will be made to keep pace with the rapid advancement of Pharmaceutical Science.

Every applicant for admission to the regular course for graduation at this College will be required to pass a preliminary examination, or to present a diploma or other satisfactory written evidence that he has passed the first grammar grade, and is entitled to enter a High School of this State, or has attended some academy of a grade equal to that of our High Schools. Those who do not present such certificates will be examined in English reading and composition, writing, geography and arithmetic.

Graduates in Pharmacy of this College are permitted to present themselves for examination for the degree of Doctor of Medicine in the Medical Department of the University of California, after attending that school two years instead of three, as required of other students. The fees have also been reduced in like proportion to graduates in Pharmacy.

Graduates of such Medical Colleges as are recognized by the American Medical Association will be permitted to present themselves for examination for the degree of Graduate of Pharmacy after one year's attendance at this College, provided they have complied with all the other conditions for graduation.

For prospectus, etc., address—

EDWARD W. RUNYON, Ph.G., *Dean*,

234 SUTTER STREET, SAN FRANCISCO, CAL.



# UNIVERSITY OF CALIFORNIA.

## DEPARTMENTS AT BERKELEY.

INCLUDING

- |   |                                       |
|---|---------------------------------------|
| 1. COLLEGE OF LETTERS.                          | 2. COLLEGE OF AGRICULTURE.            |
| (a) CLASSICAL COURSE.                           | 3. COLLEGE OF MECHANICS.              |
| (b) LITERARY COURSE.                            | 4. COLLEGE OF MINING.                 |
| (c) COURSE IN LETTERS AND<br>POLITICAL SCIENCE. | 5. COLLEGE OF CIVIL ENGI-<br>NEERING. |
| 6. COLLEGE OF CHEMISTRY.                        |                                       |

## ACADEMIC COUNCIL.

NOTE.—The Academic Council is composed of all the Professors and Instructors in the College of Letters and the Colleges of Science.

MARTIN KELLOGG, A.M., Professor of Latin, CHAIRMAN *pro tempore*.

WILLIAM D. ARMES, PH.B., Instructor in English.

THOS. R. BACON, A.B., B.D., Associate Professor of European History.

CORNELIUS B. BRADLEY, A.M.,\* Associate Professor of the English Language and Literature.

GEORGE WOODBURY BUNNELL, A.M., Professor of the Greek Language and Literature.

SAMUEL B. CHRISTY, PH.B., Professor of Mining and Metallurgy.

GEORGE DAVIDSON, PH.D., D.Sc., Honorary Professor of Geodesy and Astronomy.

GEORGE C. EDWARDS, PH.B., Associate Professor of Mathematics.

STEPHEN J. FIELD., LL.D., Honorary Professor of Law.

CHAS. M. GAYLEY, A.B., Professor of the English Language and Literature.

JOHN H. GRAY, JR., B.S., Instructor in Chemistry.

EDWARD L. GREENE, PH.B., Assistant Professor of Botany.

MELLEN W. HASKELL, PH.D., Assistant Professor of Mathematics

FREDERICK G. HESSE, Professor of Mechanical Engineering.

EUGENE W. HILGARD, PH.D., LL.D., Professor of Agriculture, Agricultural Chemistry, General and Economic Botany.

GEORGE H. HOWISON, LL.D., Mills Professor of Intellectual and Moral Philosophy and Civil Polity.

FRANK G. HUBBARD, PH.D., Instructor in English.

WILLIAM CAREY JONES, A.M., Associate Professor of United States History.

\* Absent on leave.

HERMANN KOWER, C.E., Instructor in Instrumental Drawing.

ALEXANDER F. LANGE, A.M., Assistant Professor of English.

JOHN LeCONTE, M.D., LL.D., Professor of Physics.

JOSEPH LeCONTE, M.D., LL.D., Professor of Geology and Natural History.

ARMIN O. LEUSCHNER, A.B., Instructor in Mathematics.

ADOLPH C. MILLER, A.M., Lecturer on Political Economy.

BERNARD MOSES, Ph.D.,\* Professor of History and Political Economy.

EDMOND O'NEILL, Ph.B., Assistant Professor of Chemistry.

FELICIEN V. PAGET, B.L., B.S., Assistant Professor of the French and Spanish Languages.

ALBIN PUTZKER, Professor of the German Language and Literature.

BENJAMIN H. RANDOLPH, 1ST LIEUT. THIRD U. S. ARTILLERY, Professor of Military Science and Tactics.

GEORGE M. RICHARDSON, Ph.D., Instructor in Latin.

WILLARD B. RISING, M.E., Ph.D., Professor of Chemistry.

JOACHIM HENRY SENGGER, Ph.D., Instructor in German and Greek.

FREDERICK SLATE, B.S., Associate Professor of Physics and Instructor in Mechanics.

FRANK SOULÉ (GRADUATE U. S. MILITARY ACADEMY), Professor of Civil Engineering and Astronomy.

IRVING STRINGHAM, Ph.D., Professor of Mathematics, and Dean of the College of Letters and the Colleges of Science.

EDWARD JAMES WICKSON, A.M., Lecturer on Practical Agriculture, and Assistant Superintendent of the Experimental Grounds.

---

## ORGANIZATION OF INSTRUCTION.

---

### GRADUATE COURSES.

To Graduates of the University of California, or of other institutions of equal grade, who may wish to pursue advanced work, general or special, every facility is extended that the libraries, laboratories and collections of the University afford; and, so far as is possible, courses of study will be framed to meet the requirements of such students. These courses may be so constituted as to lead to the degree of Master of Arts, Master of Letters, Master of Science, or Doctor of Philosophy; or to the professional degree of Mechanical Engineer, Mining Engineer, Metallurgical Engineer or Civil Engineer.

### UNDERGRADUATE COURSES.

*Eight Regular Courses* of study are at present established, leading directly to corresponding degrees, namely:

---

\* Absent on leave.

In charge of the Faculty of the College of Letters:

- I. The *Classical Course*, leading to the degree of A. B.;
- II. The *Literary Course*, leading to the degree of B. L.;
- III. The *Course in Letters and Political Science*, leading to the degree of PH.B.

In charge, severally, of the respective Faculties of the five Colleges of Science:

- IV. The *Course in Agriculture*;
- V. The *Course in Mechanics*;
- VI. The *Course in Mining*;
- VII. The *Course in Civil Engineering*;
- VIII. The *Course in Chemistry*;

Each of which leads regularly to the degree of B. S.

To each of these Regular Courses there pertains an established curriculum of studies, prescribed and elective, arranged in the order of four successive years.

There are permitted, in addition, *Courses at Large and Partial Courses*, not leading directly to any degree, but through each of which some one of the above-named degrees is possibly attainable.

---

*More detailed information concerning the conditions of admission, and concerning the College of Letters and the Colleges of Science in general, is contained in the Admission Circular (Bulletin No. 6) and the University Register, either of which will be sent to any address on application to the Recorder of the Faculties, Berkeley, California.*

THE LIBRARY OF THE  
FEB 26 1931  
UNIVERSITY OF ILLINOIS.







